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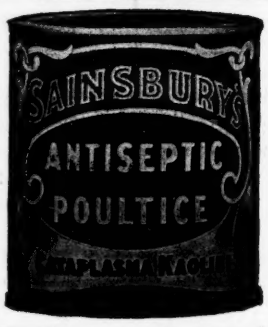

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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. II.—3RD YEAR. SYDNEY: AUGUST 5, 1916. No. 6.

Presidential Address.[1]

By **Jos. C. Verco, M.D. (Lond.), etc.,**
Retiring President of the South Australian Branch of the British Medical Association, Adelaide.

Nearly thirty years have passed since, as President of this Branch, I read my previous annual address. It was in the Board Room of the Adelaide Hospital. Its subject was "Consumption in South Australia," and contained deductions from the mortality returns of our State for some fourteen years. Now it seems a rather long and dry, though interesting document, which cost me much time and labour. Eight years before this my first medical communication in our State had been read before the Adelaide Philosophical Society, in March, 1879, on the "Statistics of Consumption in South Australia," based on the records of five years, and composed (as I well remember) in my consulting rooms in Victoria Square, to fill up leisure hours during my first year of practice, while waiting for a casual patient. These earlier conclusions were confirmed by the more extensive statistics eight or nine years later. I have often thought I should like to bring them up to date, but the task has always looked too formidable. Maybe the Branch will be glad of this. It would be almost (if not most) unkind to inflict a third dose of such a statistical series upon you, so I have decided to prescribe something quite as beneficial and I hope even more palatable.

In June, 1876, I was House Physician at St. Bartholomew's Hospital, in the wards of Dr. (afterwards Sir William) Church, and began to shoulder the real responsibility of medical work. This has been borne now for full forty years. It has necessarily afforded vast opportunities From this some experience should have been gained. Notes of more than seventeen thousand patients who have called on me are preserved in my consulting room case books. Many valuable lessons ought to have been learned, doubtless more than have been. Salient points have certainly been impressed, now by the elation of a signal success, and now by the acute depression of a regretted failure; for I am not able to boast with the veracious and learned Galen, "With the blessing of Providence I have never made a mistake." Cases, at first puzzling and incomprehensible, have later become quite clear and simple, by giving some symptom, which had been disregarded because so trivial, its proper place and force. Methods have been tried and laid aside as useless or fallacious for others which have stood the test of time.

Our experience should be not only like the stern lights of a ship shining over the vessel's wake, and making the backward track bright and interesting, but like a searchlight flashing in front and revealing dangers ahead and the way to go, and as sidelights to assist the craft around. So I propose in this address to discuss a few points which have proved of special value to me, particularly in diagnosis, and to sound notes of warning where we are liable to be tripped up.

Their value you will gauge by your own past experience, and test, if you think fit, by your future observations. Older members will please pardon apparent platitudes, for original discoveries are lacking; while younger members will graciously accept my suggestions as a benevolent legacy from one who has himself found them helpful, and hopes they may prove useful to his juniors.

As the whole range of general medicine lies open to me, my primary difficulty is to know just where to begin and what to say. Perhaps the best plan will be to made a bold plunge *in medias res*, and then strike out in whatever direction memory may indicate.

Pneumothorax is a veritable pitfall. We should think of it in all puzzling cases of chest disease. It confounds doctors probably more than anything else, because it is not dreamed of, and yet directly it is remembered or hinted at, it is quite easily detected. A patient may walk into our consulting room with a complete pneumothorax of only thirty hours' duration, and seem but little inconvenienced, and die of it within three weeks. Its pathognomonic sign is weak or absent breathing on the more resonant side of the chest. Such comparative resonance is what leads us astray. We think the less resonant or comparatively dull side must be the diseased one, and this inextricably confuses us. But directly the significance of the weak breathing with hyperresonance is grasped the other cardinal signs are looked for and found, and all fall into line at once; distension, cardiac displacement, cavernous breathing, bell sound, succussion splash, metallic tinkle, and alteration of line of fluid dulness with change of posture.

Some minor points may be mentioned. If fluid is present we must find out whether it is pus or serum for treatment sake. An ordinary hypodermic needle is useless; it is too short and too fine. If used, it may yield no fluid, and so increase bewilderment, when a longer and larger needle would immediately find fluid. An all-glass serum syringe, on which fit the needles of an ordinary Dieulafoy aspirator, is very effective, and an excellent instrument to carry about in one's bag.

But no fluid may be found, even with this, for three reasons: (*a*) In an old pyo-pneumothorax the cavity may be contracted, and the liver pulled up, and the needle enters this instead of the fluid above it. If so, try again a space or two higher. (*b*) If pus be present there may be a thick layer of fibrinous lymph or débris at the base which will not

[1] Read at the Annual Meeting of the South Australian Branch of the British Medical Association on June 29, 1916.

come through the needle. (c) Or, as the patient leans forward, the level of the liquid recedes below the previous line of dulness in the back marked out when he was sitting more erect, and the needle is pushed in above the level of the liquid, and none is obtained.

Note two other suggestions: (1) When no fluid enters the barrel of the syringe as the piston is withdrawn, the result of the exploration is not necessarily negative. If the piston moves easily, without force, evidently the barrel fills with gas, and this is positive evidence, and proves a pneumothorax, or air would not be obtained. If now the gas in the syringe be driven back through the needle held close to the nose, it will often be found fœtid, and a pneumothorax will thus be still further substantiated. (2) To get pus when it is not very abundant, bring the recumbent patient to the edge of the bed, so as to project beyond it, and thrust the aspirating needle vertically upward into the back of the chest as he lies, and the pus, if present, will be drawn into the syringe.

Phthisis.

Never deny the presence of phthisis without complete examination of the chest, in front in the erect and also in the recumbent posture, nor without listening for moist sounds, especially at the apices, while the patient coughs, when recumbent as well as when erect. Recumbency and cough are two great aids. Never deny it, though there are no definite pulmonary signs, if there is a long-standing huskiness, unless the sputum shows no tubercle bacilli, and the throat specialist reports no tubercular manifestations in the larynx; for pulmonary signs are much less easily detected in an early stage when the larynx is diseased.

Be careful about affirming phthisis because crepitations are found at one apex, even back and front, at a single examination, unless tubercle bacilli are found in the sputum; even though the patient may have been ailing for two or three months; especially if there has been some active disease at the beginning of that time from which the cough and weakness date. Sometimes pneumonic physical signs do not appear at the apex until after the febrile crisis has passed, and may then linger for several weeks before finally disappearing completely.

Be careful about diagnosing phthisis, even with persistent physical signs at one apex, but without tubercle in the sputum; though this may be occasionally or often mixed with blood. The patient, otherwise, may put us to shame by suddenly coughing a hydatid out on the floor, nearly as big as a hen's egg, and getting quite well. Or, after repeated searching in the sputum floated out in water, we may find a small piece of membrane like wet tissue paper, or even like rather firm, consistent mucus, showing the lamination so characteristic of hydatid origin.

We should be still more wary of affirming phthisis in chronic disease at a pulmonary base, though of several weeks' or months' duration. It is much more likely to be something else. It may be the residuum of a broncho-pneumonia of influenzal origin, or of a pleuro-pneumonia; and with an elevated temperature lasting many weeks, may yet quite clear up. It may be a hydatid which ruptured and was coughed up years ago, as many as 40, and has left signs of consolidation or of a cavity behind, with occasional attacks of free hæmoptysis. It may be due to inspiration of a foreign body. A lad came out from England at the advice of a leading London consultant, on account of phthisis, for the sake of our climate. He had a bad cough, with much muco-purulent sputum. His physical signs were those of consolidation at his right pulmonary base. Microscopic examination of his sputum, which was very malodorous, showed no tubercle bacilli but abundant streptococci. The case, which had begun as a pleurisy, seemed anomalous as a phthisis, and more like an abscess. Seeking a cause for this, he was asked whether he had ever accidentally inspired any foreign body. He was not aware that he had. However, he remembered on the day before his pleurisy arose, when getting ready to bathe, he put his collar-stud into his mouth, and then began to cough and lost his stud, but supposed the cough had forced it out of his mouth. X-rays showed a triangular consolidation at the right base, tailing off towards the root of the lung. No stud could be distinguished from the shadow of the spine. He was returned with his new diagnosis to the London physician. An eminent surgeon opened his windpipe, but could not extract the stud by this route, so later he opened the right chest, and struck the abscess, but failed to reach the foreign body. Pyæmia followed, with facial abscess, death supervened, and, at the post-mortem, the stud was recovered. Basal consolidation is rarely phthisical.

The Tracheal Tug.

The tracheal tug is sometimes the key to a case; in fact, it has proved a better diagnostic of aortic aneurysm than unequal pupils or unequal pulses. Its special value is its presence when the usual physical signs of this affection are absent. A man with supposed phthisis came to our State for the benefit of its dry climate. He had aphonia alternating with a husky voice; the laryngoscope revealed at once paralysis of his left vocal cord. He had a distressing cough. There were no moist sounds in his chest and no impaired resonance, but the respiratory murmur over his whole left lung was weak. None of the ordinary physical signs of thoracic aneurysm or mediastinal growth were to be detected. A marked tracheal tug proved absolutely the presence of an aneurysm. This was confirmed by a skiagraph, and ten days later, when lying in bed, he died within five minutes from a gushing hæmorrhage. Another patient was sent to me with asthma and bronchitis, but the symptoms were not quite typical, and his chest examination was inconclusive. An unmistakeable tracheal tug was quite conclusive, and though treated on Tuffnell's plan, he died of aneurysm.

Asthma.

We need to be chary of diagnosing asthma. Like "idiopathic or functional disease," it is liable to be with us an "asylum ignorantiæ" and a mistake.

A quite recent asthma, with marked dyspnœa, sounds suspiciously like something else, and we should carefully seek for and exclude organic disease. One case just mentioned was aortic aneurysm revealed by a tracheal tug. Another case of seeming asthma showed, on physical examination, hyperresonance of the left chest, with nearly absent respiratory murmur on the same side. This suggested pneumothorax, and other evidences were then conclusively forthcoming. Direct enquiry now elicited a confirmatory history of sudden pain and dyspnœa coming on while straining and never disappearing. Another case of asthma was sent from England for the sake of the Australian climate, by one of the most widely known London physicians. But his complaint seemed atypical and unusual; his breathing suggested stridor rather than asthmatic dyspnœa, and gave the impression of laryngeal or tracheal obstruction instead of bronchial; so his glottis was examined and papillomata were visible in the mirror. He was transferred to a throat specialist, who removed them and with them his "asthma." He was at once sent back cured, with a note of explanation to his surprised London physician. "Asthma," when it is really marked Cheyne-Stokes' breathing, which is often much more listressing by night than by day, we will recognize as only a symptom of the associated valvular affection of the heart, and not as a substantive disease; and seek to relieve it by toning up the heart with rest and appropriate drugs, rather than by trying to combat the dyspnœa with so-called antispasmodics. Immediate palliation of distress we may effect by direct sedatives. Another distressing "asthma" is a symptom of chronic renal disease, with cardiac hypertrophy, high tension and commencing myocardial degeneration.

Kidney Disease.

Speaking of kidney disease suggests this rule. In cases of apparent advanced chronic nephritis, think of myxœdema. A lady came from another State, after much treatment, with the diagnosis of incurable kidney affection. She was promised at her first visit complete and speedy cure, much to her pleasure and surprise. Though she had a little albuminuria, she had manifest myxœdema. In three months, with no treatment but thyroid extract, she was well, and returned home so changed as to need reintroduction to her old friends. Another patient, ailing for twenty-one years with "incurable heart and kidney disease," who had lost all her hair, and whose mental and physical condition was deplorable, responded at once to thyroid extract; her hair grew abundantly, and she became quite active again in body and in mind. And this case suggests another admonition. In early melancholia, look for evidences of hypothyroidism, and in early, mild, or intermittent delusional excitement for signs of hyperthyroidism. We may find one or other of these, and by appropriate treatment with internal secretions may keep our patients out of the mental hospital.

To return to kidney disease, the most easy and reliable method of testing for albumin has proved to be with acid, brine and heat. To a test-tube two-thirds full of urine, whether acid or alkaline, add two or three drops of strong acetic acid, then add one-sixth of its volume of a saturated solution of common salt, and mix by pouring into another test-tube. Heat the top inch; any opacity thus produced shows albumin, and can be detected by contrast with the clear urine below. By the aid of an electric light, or held in front of a piece of black cloth, the faintest cloud can be seen. It is much more delicate than the cold nitric acid test, and has the special advantage of being almost quite free from fallacies.

Two cautions are required. First, if the urine is very alkaline, sufficient acetic acid must be added to render it definitely acid, otherwise, on heating, phosphates may appear and give a cloud. Second, if the urine is of high specific gravity from concentration, on adding the acetic acid a cloud may appear; this is not albumin but urates, and will clear up at once with heat. In fact, any cloud appearing with cold acetic acid is not albumin. It may be one of several things, which I need not here discuss.

Frequently, when urine is of high specific gravity from concentration, it gives a slight sugar reaction with Fehling's solution, and doubt may exist as to whether it indicates disease or not. This is, however, easily decided. Add water to the urine until the specific gravity is reduced to 1,015. If, on being now tested with Fehling's solution, it gives a sugar reaction there is pathlogical glycosuria; if it does not, there is none; the reaction is only due to concentration of the urine. The explanation is this: healthy urine contains sugar, but in such minute amount as to be detected only by specially delicate chemical analysis, and not by the ordinary Fehling method. If the normal amount of sugar is excreted, but the urine is very reduced in quantity, that is to say, is concentrated and of high specific gravity, the relative amount of sugar in a sample may be increased sufficiently to give a reaction with Fehling; but if the concentration is now reduced by adding water until the specific gravity is lowered to 1,015, the sugar is no longer in relative abnormal amount but only in normal, and hence gives no reaction with Fehling. Frequently in life assurance reports a referee will record "Urine 1,032, faint reaction for sugar with Fehling's solution," and will recommend postponement for analysis of further specimens. This is unnecessary. If the referee will reduce the specific gravity of the sample in hand to 1,015 and test it again, absence of reaction excludes pathological glycosuria at once, and he can recommend acceptance, and so save much time and trouble.

Just here let me recommend the purchase, if possible, of two little instruments of precision: (1) One for registereing the tension of the pulse, the blood pressure. The most convenient is the anæroid form; it can be carried about without getting out of order, and is more rapidly and readily applied for use. (2) A polarizing saccharimeter, for estimating the percentage of sugar in a sample of urine. With this and an electric light, and a clear specimen, the amount of glucose is registered in less than

five minutes. These two pieces of apparatus are of very great value in one's examination room.

In feeling the pulse, we should remember the radial often divides in the forearm, and at the wrist may be very small; and so in an apparently serious case may deceive. Feel the other radial at the wrist; it may be normal in size. If this is very small, feel for the artery behind the wrist, or the *superficialis volae*, or a large ulnar. I was very nearly taken in by a man in great distress, whose pulse on the right was very small, and suggested serious circulatory trouble; but his left was large and full, and confirmed the suspicion of excitement from over-stimulation with alcohol, which proved correct.

In counting respirations, we should recollect how difficult, if not impossible, it is to breathe naturally if we are aware that our breathing is being noticed. A good plan is to count the pulse, and, when this has been done, continue to hold the wrist with one hand and the watch in the other and, while seemingly still counting the pulse, out of the corner of the eye pick up some fold in the bedding over the patient's chest or abdomen and count its movements with respiration. In this way its frequency and volume and regularity can be registered, unbeknown to the patient.

Nervous Affections.

Hysteria is often very difficult to diagnose and to exclude. We must never determine a complaint to be simply hysteria unless we are quite sure there are no signs whatever of structural disease. In hysterical patients almost any organic affection may excite hysterical symptoms. Hence, conversely, a patient may have hysteria and at the same time have almost any structural ailment. We must say to ourselves, "Evidently she has some hysteria, but what has she besides, which produces it?"

Certain signs are never hysterical, and are therefore good diagnostics: (1) Incontinence of urine. This at once proves something other than hysteria. A hysteric may have retention, anuria, polyuria, frequent micturition, but not incontinence; she never wets the bed.

(2) A Babinsky, extensor reflex from the sole. Exaggerated deep reflexes, tremors, paralyses and losses of sensation are found in hysteria, but a Babinsky in an adult means an organic lesion.

(3) A divergent squint. A hysteric may have this from old myopia or other causes; but if it has arisen during her present illness she has some organic lesion. She may develope a convergent squint spontaneously or on suggestion, and this will intermit; but never a divergent strabismus: she cannot mimic this.

If an internal squint is associated with dilated pupils, it is not hysteria; in this they are always contracted, as they are when we converge our eyes towards a near point, as in looking at the end of our nose.

Locomotor ataxy is rather a misleading disease. We need specially to think of alcoholic peripheral neuritis in connexion with it; not merely for the sake of correct diagnosis, but of prognosis, and especially of treatment. The forecast of the one is dark with despair, the other may be relieved by rays of hope. With the one diagnosis we practically consign a patient to physical perdition, with the other, by recognizing the alcoholic element, we may, by appropriate advice and treatment, permanently and possibly completely cure him. We must therefore seek the reflex to light in his pupils, try and elicit a knee jerk, look for tenderness in muscles and nerves, for definite loss of power, and for a history of alcoholic over-stimulation. Mistake means so much to the man; we must not make it.

In all cases of apparent gastric cancer, gastric or duodenal ulcer, pyloric obstruction or gastralgia, locomotor ataxia should be remembered. It should be absolutey excluded before we advise or perform an exploring, relieving or curing laparotomy. Examine for Argyll-Robertson pupil, loss of knee jerk, and Rombergism. Enquire for lightning pains, and staggering or unsteadiness in the dark, and for marked and prolonged intermittence in the gastric symptoms. If we do not we may leave in our median abdominal scar an indelible memorial of mistaken diagnosis, for it will not cure tabetic crises.

Epilepsy is at times one of the most difficult complaints to recognize. Most cases are quite easy, the attacks are typical and the history is complete. Others need much and very careful enquiry. How often is it regarded as "faints"! Whenever a man is liable to frequent faints, he most likely has epilepsy, especialy if they occur without very definite cause. If a woman has them when alone they are mostly epileptic.

One young man would come in from his work and sit down to a meal and suddenly go fast asleep, and could not be roused, but had to be lifted bodily out of his chair and dragged off to his bed. Sometimes, when company was present he would come indoors and lie down on the couch in the room, and instantly be snoring and could not be wakened; then, after an hour or more he would suddenly rouse up and be apparently quite well and return to his work. He was really suffering from post-epileptic coma.

Probably the best diagnostic is loss of consciousness. If this does not occur, epilepsy cannot be diagnosed, except, of course, in some kinds of Jacksonian epilepsy, when convulsions or jerkings are plain and the diagnosis is thus conspicuous. In supposed faints, if consciousness is suddenly lost and very rapidly regained, they are epileptic. The suddenness of onset and of recovery are valuable indications. Fainting must be very profound indeed, and must be associated with a very manifest cause to induce loss of consciousness.

The most frequent evidence of loss of consciousness is falling down. If a person frequently falls down causelessly and faints off, he is epileptic. If a female falls down when she is by herself, she is probably epileptic and not hysteric. If she falls down only in company and never hurts herself, she may be a hysteric or a malingerer, but if she injures herself she is probably epileptic.

If the tongue is bitten, or less often the cheek or lip, epilepsy is probable; or if there is involuntary micturition. The absence of either of these accidents does not disprove, but their presence is very

strong proof. They are sometimes very helpful signs. If a person on waking in the morning finds his tongue or lip or cheek sore, and a bloodstain on the pillow, he very likely has had a fit in his sleep. If he discovers he has unconsciously wet the bed, he has very likely had a fit. This sign is further helpful.

If we are treating an epileptic, and have apparently stopped the fits, we may, on enquiry, elicit the fact of occasional nocturnal enuresis, which is a fairly sure indication of the failure of a complete cure. Though his diurnal fits have ceased, his nocturnal have not.

This leads me to mention another sign of epilepsy which enquiry may elicit. Patients may find on rising in the morning the sheets on their bed badly torn, a circumstance for which they cannot account, because they are unaware of their struggles during a seizure. Again, they may wake to find themselves shivering with cold, and their blankets and sheets in a heap on the floor; or themselves on the floor, with more or less of their bedding; evidently, they had not wakened by their fall out of bed. These circumstances give a very distinct significance to faint or giddy turns through the day.

Children sometimes through the day will get sudden and inexplicable paroxysms of rage or restlessness or mischief, during which nothing can be done with them; these may last for several minutes; then almost suddenly they become sensible, quiet and docile. These paroxysms come at intervals more or less regular. They are often, nearly always, if not always, epileptic, or perhaps post-epileptic, coming on immediately after some unnoticed petit mal.

Some instances of night terror in children, who wake and suddenly act like little maniacs, and cannot be coaxed or shaken into consciousness or quietness, then abruptly become manageable and sensible, are probably also epileptic.

We need to remember, too, how sometimes the supposed cause of epilepsy is really the proof and consequence of it. A groom was driving me in my buggy, the reins fell from his fingers, and he had jerking of his hands and face and was plainly unconscious. In a few seconds he had recovered his senses and his reins. What was to have prevented him from falling off his seat, and thence onwards his epilepsy would very likely have been attributed to injury to his head and been regarded as Jacksonian. We get a history from a patient that he was riding a horse or driving a cart, and fell off and was picked up unconscious, but quickly recovered and drove his cart or mounted his horse and rode home; and thereafter he got periodic fits which are manifestly epileptic. But why did he fall? The horse did not stumble, the cart did not jolt, there was no apparent reason, he simply fell off. Really because he had an epileptic fit, and enquiry will often elicit evidences of petit mal, or of nocturnal attacks, the significance of which had not been suspected.

I do not make any reference here to migraine or Menière's disease, or uræmia, which, by careful observation and adequate history, can generally be distinguished.

A child is occasionally, though very rarely, left almost or quite stone deaf, without any motor palsy, after an attack of apparent cerebral meningitis. It has had really double otitis interna, and not cerebral meningitis. Therefore, if a child has headache, screaming, vomiting and fever, and is quite deaf, but has no motor palsies, nor cerebral pulse or breathing, do not diagnose cerebral meningitis and predict death; it is most likely otitis, and the child may recover, but stone deaf, and if an infant or a young child may be a deaf mute. I have known more than one such case.

In "sciatica," especially in patients of middle age or beyond, always examine the hip-joint in the recumbent posture, for limitation of movement, due to mono-articular arthritis. Its discovery will save a lot of medicine and disappointment. If not found, examine *per rectum*; you may feel a big cystic enchondroma pressing on the nerve within the pelvis.

If the sciatica is double, be doubly doubtful of your diagnosis. Very likely the disease is spinal, in the bones or in the cord; or pelvic, as an internal growth.

Once a patient consulted me with "rheumatics in both knees," which had been blistered and plastered and painted and rubbed most assiduously, because of the pain about them. Yet not one objective sign of disease did they show. But both hips were immoveably fixed by double osteo-arthritis. The shifting of the locality of his complaint was a surprise to him; but he was easily convinced, and induced to leave his knees alone.

Speaking of the hips, never diagnose tuberculosis, or treat it, in an infant, or in a young child, without making adequate investigation as to its diet, whether this consists wholly or chiefly of Allenburys' or other patent food. More than one instance is known where the child barely escaped splints and plaster through the suggestion of infantile scurvy.

In a persistent synovial distension of a large joint, before deciding to operate, examine the fingers and wrists and jaw joints, so as to exclude osteo-arthritis, as well as the knee jerks and pupils, lest it be tabetic.

Zona is another trap for the unwary. When neuralgic pain is present without a rash, do not make an absolute diagnosis of myalgia or neuralgia, but think of zona, and tell the patient to watch for blisters over the painful area. If you do not, they may appear and overthrow the diagnosis, and be regarded as the consequence of the use of your liniment. If you do, and they should appear, your foresight seems little short of prophetic; and if they should not, you did not predict them.

When in full bloom with its blisters, it has been mistaken for an erysipelas, but the neuralgic character of its pain, and its distribution over the area of a nerve, should prevent this. When it has disappeared and is replaced by the paroxysmal neuralgia which sometimes follows it, especially in middle or old age, it may be puzzling, particularly if the primary disease has not been recognized, or if it has not been seen by the doctor who is consulted. Special circumstances may make it specially puzzling. A man had attacks of pain over his gall

bladder, very severe and very frequent Biliary colic was diagnosed and operation proposed. But their frequency and peculiar periodicity, the absence of tenderness localized over the gall-bladder, a history obtained by leading questions, of a rash along the line of an intercostal nerve, led to an alternative diagnosis of post-zonal neuralgia, and abandonment of operation. He left for another State, where he consulted leading physicians and surgeons for this pain. For some time the zonal theory was rejected in favour of biliary colic, but was finally favoured and then allowed.

An enlarged gland above the clavicle, at the root of the neck, is well worth seeking; especially in possible cases of cancer of the œsophagus, stomach, liver or lung. It will not be found in most cases of these complaints, but now and again it rewards a search, and generally certifies malignancy. Sometimes it is quite easily felt, very hard and occasionally nodular; at others it hides beneath the sterno-mastoid, and can only be palpated with the thumb under the inner edge of the muscle and a finger over or behind it. It may be very low, behind the clavicle. It is well to feel deep down behind the sternum. Sometimes one can reach with the finger the upper border of a mass pressing upon the trachea from one side and from behind, between the windpipe and the spine, which is causing serious dyspnœa, and yet gives no detectible physical signs in the front of the chest.

There is another little area in the neck well worth remembering, and examining, *viz.*, where the cervical nerves forming the brachial plexus issue from the side of the spinal column, and where tenderness on pressure indicates a brachial neuritis, and diagnoses this complaint from such distantly related but confounded complaints as angina pectoris, scrivener's palsy, cancer of the breast, apical pulmonary phthisis, etc. But this was elaborated in a paper read before the Branch on "Radicular Neuritis" (*Australasian Medical Gazette*, October, 1913, p. 363).

In skin disease, you see a solitary red patch, perhaps six inches by four, raised, red, neither weeping nor itching, which has existed for some years, no varicose veins, "no spots anywhere else." Nevertheless, closely examine the knees and elbows. On one or more of these may be found a tiny area with dry, silvery scales. This is enough, and spells "psoriasis" without any question.

Chronic urticaria is a most elusive complaint until it is thought of. Then it is happily snared by its little lines or spots of pink, its shifting site, its ephemeral duration, its intolerable prickling and stinging, especially on exposure to changes of temperature, its scratch marks, and finally the experimental dermatographia.

In mutiple obscure lumps in the abdomen, before diagnosing malignancy, from which there is no retreat, think of multiple serositis, the old polyorrhomenitis, tubercular peritonitis, and examine for single or double hydrothorax or hydropericardium, and take the temperature. Think of leukæmia, and examine a blood-picture for myelocytes, and look for enlarged peripheral glands. Think of multiple hydatids, which may be felt in the belly or in the pelvis as hard as fibroids, and explore. Think of syphilis, and hunt for a history or for stigmata, and get a Wassermann test of the blood; and if you have any inducement, give anti-syphilitic treatment. One man deeply impressed me with his attitude towards supposed incurable and malignant cases. He said: "I never abandon them, but keep on doing the best, and oftentimes I pull the nuts out of the fire."

In appendicitis, beware of right renal calculus or pyelitis. Enquire for diagnostic symptoms and history, and especially examine the urine for blood and pus; and if either of the latter is detected, or if the former in any degree suggest a stone, don't neglect to get a skiagraph of the kidney and ureter, or two operations may be required instead of one to remove the pains.

When patients complain of diarrhœa, with frequent small, liquid motions, and much straining, especially if they are old, or bed-ridden, or after operation, always think of constipation; and before prescribing astringents and intestinal sedatives, examine per rectum for a large solid mass of fæces, which is causing the tenesmus and catarrh of the bowel.

When patients have frequent urination, and pass only small quantities of water, with straining, do not administer sedatives and alkalies to relieve irritability of the bladder; but think of retention and distension, especially after abdominal operations, and in spinal trouble; examine for a "central hypogastric tumour," and if necessary per vaginam or per rectum for the distended bladder. A catheter may summarily cure vesical irritability, which you have failed to relieve with drugs.

This suggests another caution. If on examining a patient you find a large central hypogastric tumour, if the patient is a woman, do not jump to the conclusion she is pregnant if she is married, and especially if she is unmarried, nor that she has an ovarian or a parovarian cyst; or if the patient is a man that he has a hydatid. Ask first if there is any retention of urine, because it may be a distended bladder. And if the patient or the nurse tells you the patient is passing quite enough water, and quite often enough, do not rely on this statement, but examine per rectum or per vaginam, or both, and see if there is a distended bladder, and unless you are absolutely sure, pass a catheter. Otherwise, you may have such an experience as the following, the patient sent into hospital for removal of a very large ovarian tumour, and when, under the anæsthetic, the surgeon was about to operate he could find nothing; and the nurse told him with a countenance quite unmoved that just before bringing the patient into the theatre, according to custom, she passed a catheter and drew off seventy ounces of urine.

In cases of chronic disease, do not fail to make occasional complete examinations, for various unexpected conditions are liable quietly and quickly to arise. It was the excellent custom in Dr. Church's wards to have what was called "a full day" twice a week, one day in the men's wards, and one in the women's. Then every case was thoroughly gone

into. On the intervening days new cases were examined as they came in, and old cases were seen at the suggestion and discretion of the House Physician. We ought to have "a full day" with our private patients at not too long intervals. Doubtless most of us have been surprised and somewhat chastened at a consultation, when the consultant has found a condition very evident and quite important which was not present when we made our last complete overhaul of the patient.

Acute intercurrent disease may arise in the course of chronic complaints and completely alter their aspect, and if not recognized as such may occasion a most grave and erroneous forecast. I remember being called in consultation to a case of phthisis of rather long duration. He was manifestly dangerously ill, and rapidly getting worse, with high temperatures, increased consolidation and apparently marked exacerbation of his tubercular condition. He was given only a short time to live. But in a few days he had a crisis and at once convalesced, and was soon in his previous chronic state, to the discredit of his consultant. A rather acute pneumonia had supervened upon his slowly progressive pulmonary tuberculosis, and tripped me up.

Be careful how you trust to the observations of others, when it is possible to make your own. Often we must trust, we cannot always duplicate our predecessor's work. But wherever we can we should base our diagnosis on personal examination. Because another man has not struck a stone in the bladder or felt a cancer in the rectum, it does not follow there is none. Such a history should only prompt to more careful investigation and extra precaution. Perhaps he did not distend the bladder, or he used a sound with too long a beak or too short, or only used a metal catheter, or did not push up the pouch behind an enlarged prostate, or time may have allowed the stone to grow larger. Perhaps, when examining *per rectum*, his finger was not so long as yours, or he had on a rather thick rubber glove, or had not your *tactus eruditus*, or did not push the bowel down from above, and make it a bimanual palpation, or was not so impressed with the probability of cancer, or failed to find it because it was not then so advanced. Sound for yourself, feel for yourself and find what is present.

I was called in consultation to a woman with chronic disease of her bladder, and was told that a metal catheter had been passed and she had no stone. She got better of her acute symptoms. Some months afterwards she consulted me with a repetition of the same complaint, and saw me twice and was given a prescription. As she did not improve, she wisely went to another doctor, who passed a sound, and struck a stone which he removed—about the size of a hen's egg. It will probably not happen again.

One word to the young members of the Branch. Never jump to conclusions, and don't make spot diagnoses. I have often smiled inwardly at one experience of many years ago. A lady called, and said she was thinking of getting married, and wished to know whether she was in a fit state. She was rather thin and pallid, but had no special symptoms of which she complained. I gave her an ordinary complete examination, and advised her not to commit matrimony until she had been operated on. Then she told me she had consulted a doctor, who had suggested she had better get wedded at once. Meeting him later, I asked him why he had given this advice. He replied that from her question and her manner he surmised she was pregnant, and so thought this was the best thing she could do under the circumstances. "But did you examine her?" "No! I thought she might not let me!" And so he missed a hydatid of the left lobe of the liver, nearly as big as a football, bulging out her left lower chest and epigastrium. We must not base our advice on surmise when we can ground it on observation; and we must examine our patients as thoroughly as the special circumstances warrant and permit. If we push our investigations as far as possible we shall be less likely to miss anything of importance, however trivial it may seem, and more likely to discover the real nature and full extent of our patients' maladies, and be the better able to relieve or cure them, and so fulfil the true purpose of our profession.

Reviews.

PRACTICAL PHYSIOLOGICAL CHEMISTRY.

The appearance of a fifth edition of the book on "Practical Physiological Chemistry," by P. B. Hawk,[1] designed for use in courses of practical instruction at schools of medicine and science, bears witness to its widespread adoption. The fourth edition was published in 1912, and that edition has been twice reprinted in the interval. The new edition has been thoroughly revised and in part re-written. The chapters are arranged on the basis of physiological functions. This system is perhaps the most suitable for medical students. Information of medical importance is thus interpolated with purely chemical knowledge. Each chapter contains a summary of the subject discussed. The chapters are sub-divided under appropriate headings, and the practical directions are interspersed throughout the text. Black type is used to distinguish those practical lessons which are regarded as of most importance. In his preface, the author suggests that these portions of the practical instruction should form the basis of all courses. The amount and range of this work is much greater than that demanded in Australia from medical students. A moderate estimate of the time required to complete such a course would be 200 hours. Exercises are frequently introduced, involving the use of gravimetric methods. Students in Australia have no preliminary training in chemistry to fit them for such exercises.

The student who completes this course will have gained experience of the methods used for the examination of all questions of clinical chemistry. He will be equipped to undertake any type of investigation in pathological chemistry. The quantitative methods have been selected with judgement. Their value is increased by references to the original description of the method. Frequent references abound. These are necessary in American text-books, since American teachers believe in encouraging students to consult the sources of information.

The new chapters that have been introduced deal with nucleic acids, gastric analysis, intestinal digestion, blood analysis and metabolism. The chapter on the analysis of blood may serve as an example of the way in which the author imparts instruction. It is introduced by a table

[1] Practical Physiological Chemistry, a Book Designed for Use in Courses of Practical Physiological Chemistry in Schools of Medicine and of Science, by Philip B. Hawk, M.S., Ph.D.; Fifth Edition; Revised and Enlarged; 1916. Philadelphia: P. Blakiston's Son & Co.; Royal 8vo., pp. 638, with 6 plates and 172 figures. Price, 10s. 6d. nett.

embodying the results of analyses of the blood in health, chronic nephritis, uræmia, early diabetes, severe diabetes, gout, lipæmia, cholelithiasis and arthritis. References are given to the sources of all these figures. The figures quoted have all been derived from analyses published since 1912. The characteristic changes in each affection are then discussed, *e.g.*, the increased amounts of urea and non-protein nitrogen in nephritis, the content of glucose and ketonic acids in diabetes, the augmentation of the quantity of uric acid in gout, the increased amounts of glucose, fat and cholesterin in lipæmia, and the amount of cholesterin in cholelithiasis. Methods are described in detail for the estimation of non-protein nitrogen, uric acid, creatin and creatinine, amino-acid nitrogen, sugar, acetone bodies, cholesterol, chlorides and total solids. These descriptions occupy 17 pages. The author then describes the measurement of the concentration of hydrogen ions and the estimation of adrenalin. Accounts of the use of the nephelometer and of the spectroscope follow. The chapter concludes with a detailed summary of the methods for estimating hæmoglobin and enumerating corpuscles. No account is given of the estimation of oxygen in blood, or of the methods for the analysis of the gases of blood.

The chemistry of the urine is discussed in 200 pages. This forms one of the best studies of the examination of the urine in the English language. The accurate methods of estimating urinary constituents devised by Folin are incorporated in the various chapters. This part of the book precedes the chapter discussing the methods for performing experiments on the metabolism of the various foods. Directions for the preparation of reagents and solutions form an appendix to the chapters.

This book can be recommended with confidence to the physician desirous of making those clinical examinations necessary for the diagnosis of the ailment and the treatment of his patients. The methods of carrying out tests and estimations are described with great accuracy. The quantities of material to be employed are indicated for each test. The book abounds with useful tables, instructive illustrations and enlightening text-figures.

Hospitals.

ADELAIDE HOSPITAL.

The Annual Report of the Adelaide Hospital for the year 1915 reveals the fact that, while the number of patients treated was slightly less than in the preceding year, the cost of maintenance and administration was over £2,500 more. The number of patients admitted has increased from 1,203 in the year 1870 steadily up to 5,013 in 1914. In 1915 it was 4,836. The average number of patients in the hospital on any given day has increased in 45 years from 151 to 293. In 1914 it was 298. On the other hand, the average duration of stay has decreased in the same period from 43 to 21 days. In 1870 the cost per bed per annum was £46 9s. 2½d. In 1915 it was £103 0s. 4d. The total annual expenditure in the year under review was £33,416. Of this sum, the patients contributed £1,462 in fees and the subscribers contributed £800. The Adelaide Hospital being a Governmental Department, all the necessary funds for its administration and the maintenance of its inmates are provided by the Treasury.

The work of the hospital has been carried out under difficulty, owing to the reduction of the staff. Of the eight resident medical officers, only four remain. Dr. W. T. Hayward, Professor A. Watson, Dr. A. M. Cudmore, Dr. J. A. G. Hamilton, Dr. T. G. Wilson, Dr. S. R. Burston, Dr. C. T. de Crespigny, Dr. W. E. Cavanagh-Mainwaring, Dr. H. S. Newland, Dr. R. Smeaton, Dr. C. Yeatman, Professor Kellaway and Dr. J. W. Brown were serving the Empire abroad during the year, while Dr. F. S. Hone, Dr. C. Duguid, Dr. W. Ray, Dr. F. S. Scott, Dr. Harold Rischbieth, Dr. A. Campbell Magarey, Dr. Rupert Magarey, Dr. F. Wilcox, Dr. L. W. Hayward and Dr. W. Anstey Giles undertook to carry out their duties during their absence. Several members of the consulting and resident staffs volunteered for home military service. The laboratory staff, the nursing staff, and the administrative department also yielded some of their members for active service.

Instruction was given to the members of the Army Medical Corps in elementary nursing. The disinfector of the hospital was utilized for the disinfection of many thousand military blankets during the year.

The Board registers its appreciation of the kindness of Dr. Harold Rischbieth, who presented the hospital with Meltzer's apparatus for intratracheal insufflation of ether.

Attention is called again to the overcrowding of the institution, and to the advisability of providing an infirmary for chronic cases, to which a large number of patients could be transferred. The Board also recommends the establishment of a clinic for persons suffering from incipient insanity, and a night clinic for the treatment of venereal diseases.

A table is included in the report, setting forth the various diseases treated during the year, and the results of the treatment. We have pointed out on previous occasions that these records are of small value for statistical purposes in the majority of chronic affections. Some useful information can be gleaned from entries such as those dealing with enteric fever. There were 71 patients, of whom 11 died, 54 were discharged cured and 6 were unrelieved. It is not clear what interpretation should be placed on the last category. Following the record of diseases is a list of operations performed during the year.

In the Consumptives' Home, which is situated on North Terrace, 84 patients were admitted and 44 patients were still under treatment at the beginning of the year. Of these, 75 died, 12 left the institution, and 41 remained in hospital at the end of the year.

In the cancer wards, 30 fresh patients were admitted, 39 were transferred from the General Hospital, and 6 were under treatment on January 1, 1915. The number of those who died was 22.

In the infectious diseases block, 164 cases of epidemic cerebro-spinal meningitis were dealt with during the year. Of these, 123 were military cases. There were 23 soldiers and 19 civilians who died of the disease. The total case mortality was therefore 25.6%; the mortality of the civilian cases was 46.3%, and that of the military cases 18.7%.

Two hundred and eight cases of measles were treated, with 12 deaths, which gives a mortality of just under 5.8%. Forty-eight cases of diphtheria yielded only one death.

The report is admirably illustrated with a series of charming photographs, and contains, among other things, extracts from the rules and regulations, lists of office-bearers, medical officers and contributors, and a short report of the work done in the Laboratory of Bacteriology and Patholgy.

Naval and Military.

Attached to the 187th casualty list, which was issued on July 26, 1916, is a list of those who have returned to duty. The names of Captain E. W. Ferguson, Captain A. J. Cahill and Captain T. C. C. Evans are included in this list.

We are pleased to state that there were no casualties recorded among the officers of the A.A.M.C. in either the 187th or the 188th lists.

The following notice has appeared in the *Commonwealth of Australia Gazette*, No. 91, under date of July 27, 1916:—

Army Medical Corps.

Colonel C. S. Ryan, C.B., V.D., to be Consulting Surgeon.
Lieutenant-Colonel (temporary Colonel) H. C. Maudsley to be Colonel and Consulting Physician.

OLD GOLD AND SILVER WAR FUND.

We have been asked by the Honorary Secretaries of the Old Gold and Silver War Fund (Hunter Street, Sydney) to bring to the notice of readers an appeal for assistance. They ask the public to send any old gold or silver articles, such as out-of-date brooches, lockets and other jewellery, old watches and chains, tie-pins, photo-frames, cups, metal and foreign coins, in fact, anything made of gold or silver, no matter how old, battered or broken. The saleable articles will be sold, while the unsaleable ones will be melted down. The proceeds of the disposal of these articles will be distributed to the "War Chest," the "Y.M.C.A.," and other War Funds. Members in New South Wales cannot do better than to follow the suggestions of the Committee.

The Medical Journal of Australia.

SATURDAY, AUGUST 5, 1916.

Sowing and Reaping.

The mills of the gods grind slowly; but they grind exceeding fine! There are unmistakable signs of revulsionary changes, which must inevitably be created by the people who, having forced unsound principles on the world, are driving their theories to an extreme wholly opposed to a sane state of society. Prussian militarism was begotten with the ostensible purport of improving the physical and national status of the individual members of that nation. The idea developed beyond the limitations sane persons would impose on it. Out of a defensive and health-giving movement, an aggressive and oppressive system developed. Those who had tasted the doubtful delights of arrogant autocracy knew no bounds to their ambitions. The appetite spread and power attained by the unwholesome extension and distortion of an apparently harmless system was applied in a direction, so immoral, so unjustifiable that the rest of the enlightened world felt itself constrained to rise up in opposition, with the firm determination to overthrow this ill-conceived and viciously nurtured acquisition of strength. The mills grind slowly, but surely the military section of the enemy is bringing on its own head a complete destruction of self. Whatever may be the future of the German Empire, the military menace is doomed to uncompromised disintegration. So fine do the mills of the gods grind!

The Labour Party was conceived of a desire to improve the conditions of the people. No saner impulse can be imagined than an ideal socialism, aiming at the improvement of the health and the prosperity of each citizen. But the Labour conception of sociology, like Prussian militarism, departed at a very early date from the ideal, rational endeavour and shot up into a formidable giant, without any actual knowledge of the extent of its own strength, and with but a vague understanding of the direction in which it was moving. The taste of unaccustomed power was sweet and the grasp extended. Instead of moving gradually in the direction of the safe possession of health and wealth, steps were taken hurriedly towards the brink, over which this rapidly gotten power must precipitate itself. *Ut sementem feceris, ita et metes*! But just as the gods employed the intervention of the combined nations to bring about the final emasculation of the over-power of militarism, so it is necessary for those who have the interests of the community at heart to assist in overtaking the pseudo-socialist and to restore sanity to an ill-guided democracy.

We have called attention in the past to the invidious tendency toward the gratuitous dispensing of everything to the individual by the Labour Governments. In its relation to the medical profession, the present-day Labour policy aims at the deprival of the independence of both the medical practitioner and of the patient. The practitioner is to become the slave of his *parvenu* masters, while the patient is to be in receipt of attendance from the doctor, which is paid for not by himself but by those who contribute the greatest amount to the State revenue. The endeavour of the medical profession is to bring within reach of all trained medical assistance, but to require those who have the means to pay for it, while the less fortunate are enabled to obtain it through the various agencies provided for the purpose.

HOSPITAL ABUSE.

The medical profession in Launceston have for years past been faced with a difficult problem in connexion with the conditions of admission of patients into the General Hospital. The Hospital is practically a Government institution, although its administration is in the hands of a Board of Management. The work is conducted by a Medical Superintendent and his staff of juniors. For many years the Medical Superintendent was supreme, and no visiting surgeons or physicians had any patients within the Hospital. At that time he was allowed to carry on a private practice outside, and to accept fees from indoor patients for operations performed in the institution. Two reforms have been introduced within recent years. A few beds have been set aside for a small honorary staff, and the right of the Medical Superintendent to practise outside the Hospital has been stopped. It will be seen that

the main opportunity for a surgeon to gain extended experience in Launceston was not given to anyone save the Medical Superintendent. Naturally, the community awakened to the fact that the most experienced surgeon in the city was the Medical Superintendent, and naturally they sought his aid whenever surgical intervention became necessary. Such a state of affairs was not in the interests of the public any more than it was in the interests of the profession in Launceston. Not only did the relations between the Medical Superintendent and the practitioners of the city become strained, but the former would obtain an unfair advantage over his colleagues should he deem it advisable to emancipate himself from the hospital and to start in practice for himself. The change of medical superintendents would have the effect of increasing rather than diminishing the difficulty, inasmuch as any ex-Medical Superintendent who chose to settle in Launceston would be in a position to utilize the prowess gained during his term of office, and, unless he followed the unwritten laws of medical ethics strictly, he might be able to absorb the greater part of the surgical work which was done outside the hospital. The concession of a few beds to a very small honorary staff was in reality a make-believe, for it still lay within the power of the Medical Superintendent to admit all surgical cases into his own wards and to draft off the less interesting cases to the visiting men.

The Council of the Tasmanian Branch of the British Medical Association have sought to improve matters by directing the attention of the Chief Secretary to the fact that a large number of well-to-do persons were admitted to the Hospital. These persons paid operation as well as maintenance fees. The Council held that this practice affected the interests of the medical profession seriously and pointed out that it was contrary to principles which should obtain in a Government Hospital. The Minister was asked to cause enquiries to be made with the view to the remedy of the abuse. On July 20, 1916, the Hospital Board considered this letter, which the Minister had submitted to them. The Chairman held the opinion that the complaint was unjustifiable, and that there was no abuse of the hospital system. He wanted to know whether the institution was to be a hospital or merely a charitable —a pauper—institution. Dr. Haines thought that, as long as there was no cutting of prices, there was no cause for complaint. There was no abuse at the Launceston General Hospital. Mr. Weedon contended that, as long as patients paid according to their means, the hospital should be available to the whole community. Dr. Irvine pointed out that the admission of wealthy persons to the hospital was unfair to the outside practitioners. He suggested that doctors in practice in the city should be permitted to perform operations on their own patients in the hospital. Mr. Tyson asserted that rich people had as much right to the best treatment as the poor, and if this was accorded at the Hospital, they should be able to obtain it. The same opinion was voiced by Alderman Oldham. It was eventually determined that the reply to the Minister should be along the lines indicated by the opinions expressed.

The members of the Board, and we fear the majority of local politicians, appear to have difficulty in distinguishing between the institution hitherto known as a hospital and an imaginary one which they would fain create. Originally a hospice, hostel or hospital was an asylum for the destitute sick. Asylums for sick sailors and soldiers were among the early establishments of the kind. During the days when the healing art was largely in the hands of the Church, hospitals were entirely religious hostels, and the traces of this domination is still preserved in the names of many of the leading hospitals of the world, such as "Hôtel Dieu" "Saint Bartholomew's Hospital," "La Charité" and so forth. The need for these institutions has remained unaltered since the earliest days recorded in history. The rich can secure adequate medical attendance either in their own homes, or in a private hospital, nursing home or adjunct to the ordinary hospital, set aside for paying patients and managed as a self-supporting business concern. In view of the fact that hospitals were intended for the medical care of the poor, the medical profession has shown itself prepared to extend gratuitous work. The fact that at the Launceston General Hospital the honorary staff has not claimed the privilege of looking after the sick poor to any considerable extent may be explained in part by the departure from the usual understanding in

regard to the relations between the profession and hospitals. The time-honoured method of engaging the services of young practitioners to carry out the duties of house surgeons and physicians under the direction of the responsible and experienced unpaid surgeon and physician has proved eminently satisfactory. There is one defect in this system, namely, that it leaves the door open for abuse to slip in. There are various means available for meeting hospital abuse, but the expedient adopted in Launceston of allowing the Medical Superintendent to hold supreme control over the work in the hospital, and to accept fees for operations performed on patients whose financial position allows them to pay, is the one method calculated to perpetuate this form of abuse. The community must recognize that it is to their own advantage to have practitioners in the city who have constant hospital experience in the various branches of the science and art of medicine and surgery. The exclusion of the leading practitioners from the honorary staff of the hospital and the monopoly of surgical practice by the present and past medical superintendents of the hospital tend to detract from the general utility of the profession to the public. As matters stand to-day, there are many extremely capable surgeons in Launceston who are not given the opportunity their skill, knowledge and high integrity should command.

While Launceston has fallen into the fatal error of basing its hospital arrangements on an unsound foundation, we learn that responsible authorities in other States are aiming at an equally illogical remoulding of hospital practice. In Queensland, the Ministry have announced their intention of "nationalizing" the hospitals, whatever this may mean. If the idea is to substitute for the present arrangements the institution of staffs wholly remunerated by the State and consequently under the direct control of politicians, the profession will have to resist the innovation by every means available. This is essential in the interests of the sick poor. In other States, notably in New South Wales it has been the boast of Ministers that the hospitals should be available for all. Quite recently it was announced in the daily press in another connexion that the son of a man holding a well-salaried position in a very wealthy firm and nephew of one of Sydney's wealthiest residents, who was incidentally the proprietor of this firm, had been an inmate at one of the great hospitals during a fatal illness. In emergency, anyone should be admitted to a hospital, but, under ordinary conditions, only those who cannot afford to obtain the same standard of treatment outside should be accepted. Every breach of this rule must be regarded as an instance of grave hospital abuse.

THE WESTERN AUSTRALIAN MINISTRY.

The congratulations of the members of the medical profession are being extended to the Honourable Athelstan Saw, M.L.C., on his inclusion in the Wilson Ministry in the Western Australian Parliament. Dr. Saw will be a Minister without portfolio in the Council. The announcement was made on the morning of July 28, 1916, a day after the meeting of his colleagues, the Directors of the Australasian Medical Publishing Company, Limited, in Sydney. Dr. Saw's career as a politician has been followed with interest by all doctors throughout the Commonwealth, and the British Medical Association in Australia may congratulate itself on having so excellent a champion of the rights of the profession and of humanity in the new Minister. May he remain in office for a very long time!

CHEMICAL REGULATION OF TEMPERATURE.

Most students of metabolism have been led to the conclusion that man, in common with other warm-blooded animals, regulates the constancy of his temperature by adapting the loss of heat from the surface of the body to the temperature of the blood. The flow of blood through the skin governs the radiation of heat from the surface of the body. The secretion of sweat provides a ready means for lowering the temperature rapidly. Both of these processes are controlled by nervous mechanisms, which are operated by the heat of the blood. Extensive observations, among which may be mentioned those by C. J. Martin, carried out in the Physiological Laboratory of the University of Melbourne, have been made on the conditions of warm-blooded animals at different external temperatures. These have shown that such animals can compensate for great and sudden changes in temperature by altering the rate at which they lose heat.

Cold-blooded animals form carbon dioxide in proportion to the warmth of their bodies. When the amounts of oxygen consumed by these animals with different body temperatures are plotted against the temperatures, a straight line is obtained. Lavoisier advanced the hypothesis that the warm-blooded animal endeavoured to maintain its temperature under conditions favouring increased loss of heat by increased oxidation. Liebermeister, Pflüger, Voit and Rubner have collected data which serve to establish the existence of this mode of preserving the same temperature for the body. The name of chemical temperature regulation has been given to this physio-

logical process. Although it has been proved that warm-blooded animals can and do vary their consumption of oxygen in response to changes in temperature, little information has been ascertained in regard to the mechanism involved in chemical regulation of temperature.

Some experiments performed in University College, Dublin, have shed some light on the method of excitation of this mode of regulation of temperature. J. M. O'Connor[1] has studied the consumption of oxygen in cats and rabbits anæsthetized by the oral administration of urethane. The temperature has been measured in the rectum and just beneath the skin. In these anæsthetized animals the consumption of oxygen is proportional to the rectal temperature when the animal is not shivering. When the anæsthetized animal is cooled shivering occurs, as the temperature of the body falls below a point more or less fixed in each animal. More oxygen is consumed during the act of shivering than in the same animal at rest and at the same temperature. No relation has been discovered between the rectal temperature of the shivering animal and the rate of consumption of oxygen. But when the amounts of oxygen consumed have been examined in relation to the temperature of the skin, it has been found that the extra oxygen consumed in the act of shivering above that used in the basal metabolism is directly proportional to the extent to which the temperature of the surface of the body is below the fixed point at which chemical regulation becomes operative. The appearance of chemical regulation is conditioned by the body temperature being below a fixed point, while its amount is determined by the degree to which the subcutaneous temperature is reduced below that point.

Experiments have also been conducted to determine how the animal becomes aware of the temperature for which it regulates its consumption of oxygen. These experiments have shown that the brain exercises an influence on the occurrence of shivering. When the blood flowing through the carotid arteries of a cooled, anæsthetized cat has been warmed no shivering takes place. In one experiment, the investigator has been able to show that shivering ceased at the same temperature of the brain, whether this temperature had been reached by warming locally the blood of the head or by heating the whole body of the animal. The results that have been obtained lend support to the theory that, while shivering is initiated by a low temperature of the brain, it is controlled quantitatively by the temperature of the skin. They also make it clear that the temperature to which animals regulate chemically lies below the normal temperature of the body. The relation of this point of chemical regulation to the normal temperature requires further elucidation.

THE WESTERN AUSTRALIAN HEALTH ACT.

Section 242n of the Western Australian Health Act Amendment Act, 1915, provides that no person shall publish any statement which is intended to promote the sale of any medicine for the alleviation or cure of any venereal disease or disease affecting the generative organs or functions or of sexual impotence or of any complaint or infirmity arising from or relating to sexual intercourse or of female or menstrual irregularities. Sub-section (2) contains, among other things, the provision that any person who exhibits any statement to public view in any house, shop or place shall be deemed to have published that statement. The penalty for infringement of the section is £100. On July 11, 1916, the Public Health Department proceeded against one Taufik Raad for having published a statement intended to promote the sale of a medicine, namely, "Lima Lama," for the cure of diseases affecting the generative organs or functions by exhibiting it to the public view in a shop. The prosecution relied on the common-sense interpretation of the advertisement affixed to a mirror to the effect that "this honest female remedy and tonic cures all diseases of women." The defence relied on the contention that the medicine was not intended to cure diseases of the generative organs, and that it was merely advertised as a tonic. It could be taken as a palliative for all diseases from which women might suffer. The Magistrate, in considering the advertisement complained of, stated that he had to construe its meaning strictly. He held that the fact that the advertisement set forth that the remedy would cure all women's diseases did not bring it within the operation of the section of the Act. He therefore dismissed the complaint, and allowed 21s. as costs against the prosecution.

While we cannot question the legal correctness of the Magistrate's findings, we are constrained to the opinion that if the obvious intentions of the vendors of remedies of this kind can be cloaked with immunity, the section must of necessity fail in its object. It is inconceivable that medicine sold as a "cure for all diseases of women" would not be bought by women for the purpose of obtaining relief from diseases of the generative organs or of obtaining release from the consequences of sexual intercourse. Whether the vendor of the remedy intended to convey this meaning is another matter, but it is by no means unusual for proprietors of secret preparations to mislead the public wilfully in this manner. The presence of this large loop-hole suggests the necessity of a legislative filling-in of the defect.

THE AMELIORATION COMMITTEE OF NEW SOUTH WALES.

Everyone is familiar with the organizations which have developed out of the Australia Day movement. In New South Wales it was felt that the Red Cross Society should not be asked to bear the additional burden of having to take charge of the sick and wounded men returning from the front. A conference was held in September, 1915, at which representatives of the Australia Day Fund and of the Red Cross Society participated, and it was decided to appoint a special committee for the purpose of arriving at a workable scheme for the distribution of the fund. This Amelioration Committee has the

[1] *Proc. Royal Society*, London, B., Vol. 89, p. 201, May, 1916.

function of carrying out the amelioration of the conditions of sick and wounded soldiers and sailors. Up to the middle of July, 1916, approximately 4,750 men have returned, and of this number 3,800 have received assistance from the fund. The amount spent has totalled £39,000. The payments are made with a view of tiding the men over the critical period. Permanent assistance, where this is needed, must be obtained from the Repatriation Fund or some private sources. The ordinary assistance given by the Amelioration Fund is based on a uniform rate of payment for single men, for married men, for married men with families and for single men with dependents. In some cases, assistance is extended, in order that the men may acquire small businesses of a suitable and congenial nature.

The work of the Committee has the whole-hearted sympathy and encouragement of the community. In one respect this work is rendered somewhat complicated, inasmuch as the task of doing the right thing for men, who are suffering from the effects of wounds and of shell explosions on the nervous system, is not an easy one. The Committee has decided that it is best for these men to get about among their fellow-men without the necessity of having to undertake unduly heavy work. At times they are freed from the necessity of doing any work at all until they are completely restored to health. To these men the Committee give the assurance that there is a helping hand between them and want. This determination will certainly command respect and sympathy, but how much wiser would it be if the men, who are suffering from functional nervous affections, were kept for as long a time as may be necessary in a neurological clinic, under the care of a skilled neurologist.

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending July 22, 1916:—

	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever	7	1	0	0	5	0	12	1
Scarlatina	57	2	4	0	54	0	115	2
Diphtheria	42	2	2	1	58	8	102	11
C'bro-Sq'l Menin.	5	1	0	0	3	1	8	2
Infantile Paralysis	0	0	0	0	1	0	1	0
Pul. Tuberculosis	35	6	1	0	†		36	6
Malaria	1	0	0	0	0	0	1	0

† Notifiable only in the Metropolitan and Hunter River Districts.

SMALL-POX IN NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the four weeks ending July 30, 1916:—

	Cases.
Sydney	3
Country—Narrabri	18
Total	21

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health Victoria, during the week ending July 23, 1916:—

	Metropolitan.		Rest of State.		Totals.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Diphtheria	65	3	47	1	112	4
Scarlatina	11	0	11	0	22	0
Enteric Fever	1	0	0	0	1	0
Pulmonary Tuberculosis	18	2	5	6	23	8
C'bro-Spinal Meningitis	24	—	9	—	33	—

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending July 22, 1916:—

Disease.	No. of Cases.
Cerebro-Spinal Meningitis	5
Varicella	17
Pulmonary Tuberculosis	11
Scarlatina	13
Diphtheria	27
Enteric Fever	7
Ankylostomiasis	4
Erysipelas	2

THE HEALTH OF TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the week ending July 22, 1916:—

Disease.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Diphtheria	2	2	19	23
Pulmonary Tuberculosis	3	0	3	6
C'bro-Spinal Meningitis	2	0	2	4
Ophthalmia Neonatorum	0	1	0	1
Scarlatina	0	0	1	1

TOUTING AT NIGHT CLINICS.

The attention of the Director-General of Public Health having been called to the article which appeared in this Journal of July 15, 1916, in which it was reported that touts hang around the Venereal Clinic attached to the Royal Prince Alfred Hospital, and endeavour to entice patients to seek treatment by certain individuals instead of going to the institution mentioned. Dr. Paton has now furnished us with a statement showing the action taken in regard to this matter.

From the information supplied, we learn that as far back as April last the Minister of Public Health had this matter under notice, and obtained reports from the police with a view to prosecuting the people carrying on this nefarious practice. Dr. Paton further points out that it would appear that the people who were engaged in this professed business of curing venereal diseases heard that steps were being taken against them, as the police reports furnished in regard to the matter show that touting of the nature referred to in the article has now ceased.

The authorities of the hospital were notified, and they have expressed their appreciation of the prompt and effective action taken by the Minister.

THE NOTIFICATION OF INFECTIVE DISEASES.

The Director-General of Public Health of New South Wales wishes to call the attention of the members of the medical profession to the fact that the following diseases have been proclaimed on the dates given "infectious diseases" within the meaning of the Public Health Act, 1902:—

Enteric fever, scarlatina and diphtheria (January, 1898), bubonic plague (January, 1900), acute anterior poliomyelitis (February, 1912), acute malaria (March, 1915), epidemic cerebro-spinal fever (October, 1915). These diseases should be notified by practitioners on Form No. 136. Cases of suspected plague or small-pox should be immediately notified by telegram, and cases of suspected leprosy by letter addressed to the Secretary, Board of Health, Sydney. Pulmonary tuberculosis has been made notifiable by proclamation under the Public Health (Amendment) Act, 1915, in the Metropolitan and Hunter River combined sanitary districts. The notifications should be made on special forms obtainable from the office of the Director-General, and returned to the Medical Officer of Health, Queen Victoria Markets, Sydney, or to the Medical Officer of Health, Newcastle.

Abstracts from Current Medical Literature.

DERMATOLOGY.

(42) Monilethrix.

George Mackee and I. Rosen (*Amer. Journ. Cutaneous Dis.*, June, 1916) review the literature, together with a clinical and histological study and a report of six cases of monilethrix. This condition was first described by Walter Smith, in England, under the title of "A rare nodose condition of the hair," but it was Crocker who later applied to it the term "monilethrix." It is often hereditary, and is usually noticed at or shortly after birth. It may affect the whole scalp or only patches, the eyebrows, eyelashes, the hair of the axillæ, and external genitals, and even that of the trunk and extremities. When the entire scalp is affected, the individual is either totally bald, or has stout, twisted, curved, broken, lustreless hairs, ¼ inch to 1 inch in length, which are sparsely scattered over the scalp, with here and there an apparently normal hair, several inches in length. The condition is especially noticeable in girls. The hairs are beaded at regular intervals, the beaded portions corresponding to the normal hair, whilst the internodes, or constrictions, are composed of thickened cuticle, reduced cortex, and almost invariably no medullary substance. *Keratosis pilaris* is usually associated, and there may be some pityriasis of the scalp. Sections from one of the cases showed dilatation of the hair follicles in their upper two-thirds. There was a marked increase and irregularity of keratinization in the upper portion of the follicle, so that large hyperkeratotic masses encroached on its wall. On this account the hair was obliged to pursue a tortuous course, and showed a twisting or axial rotation in the follicle. This patient was born in Russia, æt. 32, and had a brother, as well as one of his four children, affected with monilethrix. There was complete baldness at birth, and at the third month the hair grew very sparsely. Three types of hairs were observed: (*a*) Black, wiry hairs, two or three inches in length, and to the naked eye apparently normal. (*b*) Very stiff, black hairs, about one inch in length, and these also appear normal. (*c*) Very short hairs, from one-quarter to one-half inch in length, curved, sharply bent, lustreless and brittle. These hairs were beaded, whilst some of the other types were also found to be beaded, when examined microscopically. *Keratosis pilaris* was present on the scalp and nape of the neck, as well as the bearded portions of the face and neck.

(43) Pityriasis Lichenoides Chronica.

John B. Stokes draws attention to the difficulty attending the differential diagnosis of the guttata form of parapsoriasis from a papular syphiloderm (*Amer. Journ. Cutaneous Dis.*, May, 1916). A patient with the former condition presented himself with an eruption affecting the entire surface of the body, excluding the scalp, palms and soles. The following lesions were present, *viz.*, (1) fleshy erythematous papules, pin-head to split-pea size; (2) larger plaques, a centimetre or two in diameter; (3) occasional annular or reniform papules on the trunk; (4) oval, brownish or yellowish waxy papules, with a scarcely appreciable elevation, and an adherent, invisible scale, apparent only on light curettage; (5) striking hyper-pigmentation, from fawn colour to a dirty brown, about the periphery of some active lesions, and at the sites of involuted lesions; (6) retiform erythemato-squamous patches over the scapulæ, and here and there on the extensor surfaces. There were no gyrate or serpiginous figures. The more recent lesions were often bright red and urticarial in appearance, whilst the older lesions were dull, dusky purplish or brownish red in colour. The mucous membranes were negative. The eruption in general showed a greater resemblance to syphilis, for which the patient had been previously treated without success, than to psoriasis. The Wassermann reaction, however, was negative, and lymph obtained from the papules showed no spirochaetes. An aid to the diagnosis was the retiform variety of the lesion on the scapulæ and extensor surfaces, and the waxy type of some of the papules. The pathological findings conformed to those of *pityriasis lichenoides chronica*. Venesection was performed on several occasions, and coincident with this marked improvement took place, but it was impossible to decide whether the apparent benefit was merely *post hoc* in the course of a spontaneous remission or of actual therapeutic value.

(44) Radiographic Diagnosis of Metastatic Pulmonary Malignancy.

A. B. Moore and R. D. Carman deal with the radiographic diagnosis of secondary malignant disease of the lung (*Amer. Journ. Roent.*, March, 1916). The clinical findings and symptoms are first briefly reviewed, and then they describe the radiographic appearance. They hold that the appearance is definite, and that a positive diagnosis can be made in the majority of cases. The differential diagnosis is from (1) tuberculosis, (2) syphilis (gumma and interstitial infiltration), and (3) cysts (especially hydatid); and the following conclusions are arrived at: Pulmonary metastases are not uncommon. Radiographically, they can be readily diagnosed, in many cases saving a useless surgical operation. They point out that in more than half the cases—above 60%—there was a relative absence of increase in the mediastinal shadow, favouring the view that these metastases are embolic, and not lymphatic, in spread.

(45) Fracture of the Os Calcis.

B. F. Lounsbury (*Surg., Gynec. and Obstet.*, June, 1916) deals with fracture of the *os calcis* from the radiologist's point of view. This fracture is by no means uncommon, forming about 2% of all fractures. The causation is usually either a fall from a height on to the feet, a muscular strain, or crushing between two opposing forces. The usual positions of the line of fracture are (1) through the concave facet, beneath the convex facet of the astragalus, in a vertical, longitudinal or obliquely backward direction, (2) from a point just in front of the tuberosity beneath to a point just behind the posterior border of the convex astragalus articulation, or (3) sprain fracture of part or of the whole tuberosity from contraction of the calf muscles, or from strain of the plantar fascia, ligaments and muscles pulling off their points of insertion. The author deals with the diagnosis and the treatment, and with the after-results if the injury be neglected, or not recognized, as well as with prognosis.

(46) Technique of Roentgenography of the Intra-uterine Fœtus.

F. Perussia (*La Radiologia Medica*, 1914, No. 5) discusses the procedure in applying Roentgographic methods to the fœtus *in utero*. Thorough evacuation of bladder and alimentary tract is essential. The position of the patient and the direction of the rays varies with the exact purpose of the examination. If the relation of the fœtal head to the pelvis, or the dimensions of the pelvis are to be determined, the radiographs would be taken with the central beam in the sagittal plane, the former being taken antero-posteriorly, the latter postero-anteriorly. If the possibility of pregnancy is to be examined for, or multiple pregnancies, etc., a semi-lateral exposure is best, the patient lying mid-way between the lateral and the dorsal, or the lateral and the ventral positions. Soft tubes, intensifying screens, and raying during apnœa are advisable.

BIOLOGICAL CHEMISTRY.

(47) Antiseptic Action of the Chloramine Group.

H. D. Dakin, J. B. Cohen, M. Daufresne and J. Kenyon have studied the properties of fifty-two substances of the chloramine group (*Proc. Royal Society, B.*, vol. 89, May, 1916). This study is the outcome of previous investigations on the germicidal qualities of sodium hypochlorite. The substances examined belong to seven groups: chloramine compounds in which the NC1 group is separated from a benzene ring by a sulphone radicle; naphthalene derivatives of a similar constitution; other dicyclic derivatives of the same type; chloramine compounds in which the NC1 group is attached to a benzene ring; bromamines; products of the action of hypochlorites on proteins; and certain hypochlorites, hypobromites, and similar iodine derivatives. Some new bodies have been prepared, of which para-toluene sul-

phochloramide is considered of most importance. This body has been extensively used in surgical practice with success. The germicidal power of all these substances have been tested on staphylococci and on *bacillus pyocyaneus*. The antiseptic has been used in an aqueous solution and in a fluid containing 50% horse serum. The antiseptic has been allowed to act for two hours before the cultures have been prepared to determine whether the germs have been killed. In general, the substances of the first three groups are germicidal in aqueous solutions at a dilution of 1 to 100,000 and in solutions with serum in dilutions of 1 to 1000. The bromamines are less active as antiseptics. The chlorinated proteins have high germicidal qualities. Sodium hypobromite and hypo-iodite have little antiseptic power.

(48) Simulation of Jaundice.

H. Pecker (*C. R. Soc. Biol., Paris*, December, 1915) discusses the differential diagnosis of biliary jaundice from the condition produced by the ingestion of picric acid. He finds that the urine affords convincing evidence of the presence of picric acid. A simple means of detecting the urines from persons who have taken picric acid is to mix the urine with an equal volume of neutral acetate of lead solution. On separation of the precipitate by filtration the filtrate is coloured pale yellow. Urines containing bile are decolourized by this means. To confirm the presence of picric acid the urine is treated with sulphuric acid and a little permanganate of potash. The mixture is warmed until almost decolourized, cooled and extracted with sulphuric ether. On evaporation of the ether the residue contains picric acid. The picric acid may be detected by the following tests:—A thread of wool is immediately stained yellow. This yellow colour is changed to red by a drop of ammonium sulphide. A solution in water is turned cerise pink by a fragment of potassium cyanide. A piece of filter paper soaked in the solution and touched with sodium carbonate is turned red when exposed to the action of dilute hydrocyanic acid or cherry laurel water.

(49) Colour Reactions for Indol and Skatol.

V. E. Nelson (*Journ. Biol. Chemistry*, April, 1916) has described a series of characteristic colour reactions suitable for the rapid and accurate separation of indol and skatol in fermented mixtures. Dimethylaniline gives with skatol and sulphuric acid a deep violet colour, which is completely soluble in chloroform. Indol gives a faint red colour, not soluble in chloroform. Peruvic aldehyde and sulphuric acid yield with indol on the addition of a crystal of ferric sulphate a red-violet colour, which cannot be extracted by chloroform carbon bisulphide or amyl acetate, but is soluble in amyl alcohol. Skatol gives a yellow coloration after this treatment. A very sensitive reaction for skatol is given by dissolving a few crystals of glycolic acid in a solution of skatol and adding an equal volume of sulphuric acid. A deep, reddish violet colour is formed. A trace of ferric sulphate intensifies the reaction. The colour is completely soluble in chloroform, but is not extracted by amyl acetate. Indol gives only a brown colour, not soluble in chloroform. A drop or two of a solution of glyceric aldehyde, when added to a solution of skatol in the presence of sulphuric acid, produces an intense red colour, soluble in chloroform. When a few drops of an alcoholic solution of vanillin are added to a solution of indol and the mixture strongly acidified with hydrochloric acid, a fine orange colour forms. Skatol forms a deep violet solution with the same reagents. Sulphuric, hydrofluoric and phosphoric acids do not develope the colours. The reactions are very sensitive, distinct colours being formed with dilutions of one part of indol or skatol in 2,000,000 of water. The colour formed by skatol is soluble in chloroform, amyl acetate and amyl valerianate, but that formed with indol is not soluble in these reagents. It is thus possible to recognize both substances in mixtures. The intensity of the colour appears to be proportional to the quantity of skatol or indol present. Vanillin yields colour reactions with amyl, butyl and propyl alcohols and acetone in the presence of much hydrochloric, sulphuric or phosphoric acids. Vanillin also gives a colour reaction with tryptophane and sulphuric acid. The colour reactions must be distinguished from those with indol and skatol.

(50) Diffusion Through Semi-Permeable Membranes.

A. J. Brown and F. Tinker (*Proc. Royal Society*, London, B., Vol. 89. November, 1915) have studied the rate of absorption of phenolic solutions by seeds of *Hordeum vulgare*. These seeds are enclosed by a membrane, which exhibits the exceptional property of differential permeability. Experiments have shown that more water enters the seeds when they are immersed in solutions of those solutes, which are able to diffuse through the semi-permeable membrane, than when the seeds are immersed in pure water. It has been also noted that the amount of water entering the seeds varies with the nature of the solute. This difference will depend on such physical properties of the solution as ionization, osmotic pressure, vapour pressure, viscosity and surface tension. Certain phenols have been found to vary among themselves in some of these physical properties, while showing constancy in other properties. The absorption of water from solutions of phenol, resorcinol, quinol, and pyrogallol into the seeds has been studied. The rates of diffusion of moisture into the seeds at different temperatures have been found proportional to the vapour pressures. It has also been demonstrated that the variations in the rates of different phenols is associated with differences in the surface tensions of the solutions. The conclusion is drawn that, when the osmotic pressures, vapour pressures, and viscosities of different solutions of permeable solutes are equal, the rates of diffusion across the barley membrane are inversely proportional to their surface tensions.

(51) Phenomena of Coagulation.

S. B. Schryver has shown that solutions of sodium cholate set to a gel when heated to 50 ° C. in the presence of a salt of calcium, and that the formation of a gel is inhibited by substances whose inhibitory actions run parallel to their narcotic action, and to their power of inducing cytolysis and exosmosis in living cells (*Proc. Royal Society*, London, B., Vol. 89, April, 1916). The substances tested have been chloroform, chloral hydrate, alcohol, propyl carbamate, urethane, butyl alcohol, acetonitrile and some others. The formation of the gel is likewise inhibited by salts of sodium, magnesium, potassium and lithium. This inhibitory antagonism can be prevented by relatively small amounts of salts of calcium. Similar antagonisms of sodium, magnesium, etc., to calcium have been noted in biological phenomena, such as in the clotting of plasma, in the development of fish as *Fundulus*, and in the super-vitality of seaweeds as *Rappia maritima*.

(52) Human Spermatic Fluid.

B. Sjovtzov has determined the composition of a number of samples of human spermatic fluid, and compared the results that he has obtained with those that he has found for spermatic fluids of the dog and horse (*C.R. Soc. Biol.*, Paris, March, 1916). Human spermatic fluid contains 9.6% total solid matter, while that of the horse contains 4.3% and that of the dog 2.5%. In the human fluid the ash amounts to 0.9% and the organic matter to 8.7%. There is slightly more ash in equine spermatic fluid, and about 0.67% in that of the dog. The proteins of human spermatic fluid consist of albumins, globulins, nucleo-proteins, mucins and albumoses. The sum of these proteins amounts to one-third of the total organic matter. The ethereal extractives form about 0.2% of the spermatic fluid. The nitrogenous extractives are present in large quantity, and form more than half of the total solids. The spermatic fluid of the horse contains almost as much protein as human spermatic fluid. Canine spermatic fluid contains 1.3% protein and little extractive material. Albumoses have been separated from every sample of spermatic fluid examined. Cholesterin has been detected in the equine and in the canine spermatic fluid, but not in the human fluid. The freezing point of human spermatic fluid is — 0.55° C., which is closely similar to that of human blood serum. The freezing point of that of the horse is similar, but that of the dog is somewhat lower. The albumoses detected have been identified as belonging to the deutero-albumose group.

British Medical Association News.

ANNUAL MEETING.

The Annual Meeting of the South Australian Branch was held at the House of the Branch, Hindmarsh Square, Adelaide, on June 29, 1916, J. C. Verco in the chair.

Report of Council.—The annual report of the Council for the year ending June 30, 1916, and the financial statement and balance sheet were presented and adopted.

Annual Report of the Council for Year ended 30th June, 1916.

The Council has the honour to submit the following report of the work of the Branch for the year ended June 30, 1916.

Membership.—The Branch now consists of 250 members. Of these, 12 were elected during the year. Actual increase of Branch is five members.

The Council regrets to record the deaths of Surgeon Major Hinton, the oldest member of the profession in Australia, and Dr. W. J. Gething, of Port Adelaide.

Meetings.—The annual meeting last June was held in the evening, since there was no annual dinner. Dr. J. B. Gunson unveiled a coloured photograph of Dr. A. A. Hamilton, a present to the Branch from Mrs. Hamilton.

Nine ordinary and two special meetings were held, the average attendance at ordinary meetings being 26 members.

At the ordinary meetings and clinical evenings, 12 papers were read, and 20 living exhibits and many pathological specimens were shown.

The Council has met 13 times during the year, and much work has been accomplished, more particularly in regard to military matters.

The President made a special trip to Melbourne, to attend a conference in connexion with the Federal and State Medical War Committees, which have been established during the year.

Representation.—Dr. W. T. Hayward, of Adelaide, was nominated as group representative of Victoria, Tasmania, West Australia and this State, on the Council of the British Medical Association in England.

Federal Committee.—Drs. W. T. Hayward and F. S. Hone again represented the Branch on the Federal Committee.

Annual Subscription.—It was decided that members absent on military duty should pay £2 2s. for this year.

Library.—The usual grant of £50 has been paid to the University. The Library Committee has felt that, owing to the paucity of books being published during the war, the periodicals already being taken should be continued, and no further purchase of books should be made.

The War.—Many members are still absent on military duty, and it is a pleasure to record that a number are in

STATEMENT *Re* LIBRARY FUND.

	£ s. d.		£ s. d.
To Balance, December 31, 1914	79 10 0	By Bookcases Purchased	8 16 0
„ Interest	1 9 7	„ Books Purchased	3 3 0
„ Subscriptions Received, 1915—94½ Members	49 12 0	„ Cabinet Purchased	4 0 0
		„ Paid to University	50 0 0
		„ Balance	64 12 7
	£130 11 7		£130 11 7

To Balance Brought Down, £64 12s. 7d.

REVENUE ACCOUNT FOR YEAR ENDED 31st DECEMBER, 1915.

Dec. 31.	£ s. d.	£ s. d.	Dec. 31.	£ s. d.	£ s. d.
To Sundry Expenses — Printing, Stationery, Postage, etc.	25 5 8		By Balance as at December 31, 1914		582 15 5
„ Clerical Assistance	20 0 0		„ Subscriptions and Arrears	538 5 6	
„ Grant to University Library	50 0 0		„ Less Amount Repaid—		
„ Heyne, Potter—Wreath	1 1 0		Medical Benevolent Fund £8 6 0		
„ Capitation Grant, Federal Committee	5 18 0		Medical Defence Association 0 5 0		
„ Books Purchased Account Library	3 3 0			8 11 0	
„ *British Medical Journal* (including exchange)	236 8 0				529 14 6
„ *The Medical Journal of Australia*	239 11 8		„ Typewriting, etc.		0 10 6
		581 7 4	„ Interest on Treasury Bills and Bank Accounts		19 17 11
„ Balance		570 1 9	„ Repaid by Library Account for Books		3 3 0
			„ Subscriptions Received in Advance		15 7 9
		£1,151 9 1			£1,151 9 1

BALANCE SHEET AS AT 31st DECEMBER, 1915.

LIABILITIES. Dec. 31.	£ s. d.	£ s. d.	ASSETS. Dec. 31.	£ s. d.	£ s. d.
To Sundry Creditors—			By Plant—Duplicator, Bookcases, Cabinet		125 1 6
The Medical Journal of Australia	59 10 0		„ Treasury Bills		100 0 0
H.S.N.—Disbursements	1 5 4		„ Sundry Debtors—Library Account		16 7 0
Capitation Grant to Federal Committee	5 18 0		„ Bank Balances—		
		66 13 4	National Bank	£89 15 8	
„ Balance as at December 31, 1915		570 1 9	Savings Bank	210 15 5	
			Commonwealth Bank	30 2 11	
			Savings Bank—Library Account	64 12 7	
					395 6 7
		£636 15 1			£636 15 1

June 1, 1916. Audited and found correct. H. HIGHAM WIGG.

command of units and many others have gained promotion, while two have been mentioned in dispatches.

Venereal Disease.—A discussion on the proposed legislation in regard to venereal disease in this State occupied a considerable time at several ordinary and special meetings of the Branch.

Metric System in Prescribing.—The Branch at its last meeting unanimously decided to recommend its members to adopt the Metric System in writing prescriptions. This step was taken after mature consideration. The Council appointed representatives to hold a conference with those of the Pharmaceutical Society, and then recommended it to the Branch.

JOS. C. VERCO, President.
A. CAMPBELL MAGAREY,
Acting Hon. Secretary.

June 16, 1916.

Election of Officers.—The following members were elected to the Council for the ensuing year:—

President: Dr. J. C. Verco.
Vice-Presidents: Dr. A. M. Cudmore and Dr. B. Smeaton.
Honorary Secretary: Dr. H. S. Newland.
Honorary Treasurer: Dr. W. A. Verco.
Honorary Auditor: Dr. H. H. Wigg.
Members of the Federal Committee: Dr. W. T. Hayward and Dr. F. S. Hone.
Members of Council: Dr. J. E. Good, Dr. W. J. Gregorson, Dr. Hampden Carr (elected). (Drs. R. S. Rogers, H. H. E. Russell and R. H. Pulleine, elected 1915.)
Members of the Library Committee: Dr. F. S. Hone, Dr. A. Lendon, Dr. H. Swift and Dr. A. C. Magarey.
Representative of "The Medical Journal of Australia": Dr. A. C. Magarey.

Dr. J. C. Verco, the President, read his address (see page 85 of this issue).

Dr. R. H. Pulleine presented an exhibition of South Australian products.

MEDICO-POLITICAL.

The Council of the Victorian Branch has had some matters of medical ethics under consideration for the past two months.

As a result of statements made at a monthly meeting the Organization Committee considered the position of lodge members absent on military service. It reported that in general the various Orders were keeping both married and single members financial on the doctors' lists, but that the Ancient Order of Rechabites were keeping only married men financial. It was therefore decided to forward a circular letter to the executive bodies of all lodges, conveying the following resolution of the Council:—

> That in view of the fact that we have been informed that some few Orders of the Friendly Societies are not keeping their members, who are absent at the war, financial on the doctors' lists, we desire to draw attention to the fact that no such member will be entitled to reinstatement on any doctor's list without re-examination.

Replies were received from nearly all the Orders to the effect that at the outbreak of the war instructions had been issued to all the Branches that both married and single members should be kept financial on the doctors' lists. They would like to learn of any dereliction of this duty.

Professor Berry has reintroduced his scheme for removing the Medical School to a site near the Melbourne Hospital, and the Council has given their approval to it. Three delegates were appointed to a deputation to wait on the State Government at an early date.

A file of correspondence between the Chief Secretary's Department and the Pharmacy Board with regard to the indiscriminate sale of chlorodyne was referred by the Chief Secretary to the Branch for its opinion. The Council decided to recommend that chlorodyne in any form should be placed in the First Schedule of the Poisons Act, requiring it to be signed for.

The following were elected members of the Branch:—

Dr. Frank W. Fay, East Kew.
Dr. Edward M'Donald, Bacchus Marsh.

The following have been nominated for election to the New South Wales Branch:—

Dr. C. R. Wiburd, Mater Misericordiæ Hospital, North Sydney.
Dr. D. A. Arnot Davis, Milner Street, Mosman.
Dr. J. J. Maloney, West Wyalong.
Dr. H. H. Jamieson, Collingwood Street, Drummoyne.
Dr. Hector Beale, St. Vincent's Hospital.
Dr. Leslie T. Alsop, Botany Road, Randwick.
Dr. Henry Dolman, 28 College Street, Sydney.
Dr. J. H. R. McCutcheon, General Hospital.
Dr. R. J. Silverton, Sydney Hospital.
Dr. Frank Elliott T. True, Brunswick, Melbourne.
Dr. Malcolm R. Finlayson, Lightcliffe, Wollongong.
Dr. Clyde Davis, Royal Alexandra Hospital.
Dr. John Sidney Wilson, South Sydney Hospital.
Dr. Leslie Utz, Royal Alexandra Hospital.
Dr. Dorothy M. Voss, Royal Prince Alfred Hospital.
Dr. Thomas L. Parr, Royal Prince Alfred Hospital.
Dr. Harold Picton Clark, Royal Prince Alfred Hospital.
Dr. Bernard B. Bloomfield, Cessnock.
Dr. Archie Sheridan Cockburn, 31 Chandos Street, Ashfield.
Dr. W. Wallace Cameron, South Sydney Hospital.

BELGIAN DOCTORS' RELIEF FUND.

Queensland.

Dr. A. Jefferis Turner has forwarded a cheque for £4 4s., being his donation to the Belgian Doctors' Relief Fund for the months of June and July.

AUSTRALASIAN MEDICAL PUBLISHING CO., LTD.

Annual Meeting.

The Annual General Meeting of members of the Australasian Medical Publishing Company, Limited, was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on July 27, 1916. The following is the report of the Directors:—

The Directors submit their report and balance sheet as at 30th June, 1916, together with profit and loss account for the twelve months ended 30th June, 1916.

The Board is gratified to note that, despite the continued distractions of the war and the abnormal social and economic conditions resulting from it, *The Medical Journal of Australia* has maintained its position and satisfactorily fulfilled its functions as a medical journal, and as the official organ of the Branches of the British Medical Association in Australia. On the financial side the operations of the company, in common with all other newspaper businesses, have been seriously embarrassed by the shortage of paper, which has increased the cost of producing the *Journal* by about 26.85%. It is fortunate, however, on the other hand, that the income from advertisements has advanced sufficiently to compensate for the loss.

Dr. W. H. Crago and Dr. W. Kent Hughes retire from the Board of Directors, in accordance with the Articles of Association; but they are eligible and offer themselves for re-election.

W. H. CRAGO, Chairman.

Dr. W. H. Crago and Dr. W. Kent Hughes were duly re-elected Directors of the Company.

THE HEALTH OF SCHOOL CHILDREN IN TASMANIA.

Appended to the report of the Minister of Education of Tasmania for the year 1915 are extracts from the reports of the four medical officers.

Dr. Ethel M. Hawkins states that 139 schools in the southern district were inspected during the year. Of this number, 124 were State schools, 13 were convent schools and two were private schools. The inspection follows in convent and private schools only after invitation. The number of children examined was 5,719. Adenoid vegetations were discovered in 1,088. This represents approximately 19% of the children attended. In the majority of cases, the defect was sufficiently serious to necessitate operative treatment. Hypertrophy of the tonsils was found in 198 children, at times in association with adenoids. The defective vision, as represented by less than ⅔ full vision, was found in 177 children. Stabismus, nystagmus, corneal

opacity and loss of one eye were among the other ophthalmic defects. The hearing was deficient in 129 children. No less than 135 children had goitres. Pediculosis was discovered in 70 cases, chiefly in the larger schools. There were 48 cases of skin disease, including scabies and impetigo.

The number of backward children is given at 39, and Dr. Hawkins records that some of these were mentally defective and one was an idiot. She has found that the teeth of the children were frequently neglected. No statistics of dental defects were kept.

Morbilli occurred in four schools, pertussis in four schools, scarlatina in three schools, diphtheria in three schools, influenza in one school, varicella in three scools and scabies in three schools. At Nubeena, two children died of diphtheria. There were 13 cases altogether. At Evandale there were also two deaths from diphtheria. At Englishtown one child died of scarlatina.

Considerable difficulty has been experienced in persuading the mothers to meet the medical inspector, for the purpose of hearing the report of the examination of the children. In many cases the mothers expressed their intention of having the children attended to. Dr. Hawkins makes it a rule to impress on the mothers the necessity of regular cleaning of the teeth. She announces that a dental clinic will be established during the course of the year 1916.

Dr. M. J. Moffatt has visited 86 schools in the northern district, including five for special medical inspection. The number of children examined was 5,229. Defective vision was found in 167 children, stabismus in 40, blepharitis in 116, and ptosis in 2. In some instances the children were found to be wearing unsuitable glasses. There were 53 cases of marked defective hearing, due to neglected adenoid vegetations. In a few cases the aural defect resulted from scarlatina. In 210 cases Dr. Moffatt discovered neglected adenoid vegetations, and in 301 hypertrophy of the tonsils. In all these cases immediate attention was deemed to be necessary. There were 38 cases of anæmia and impaired heart function and three cases of rheumatic endocarditis. The number of goitres discovered was 61.

Dr. Moffatt records the fact that the number of skin affections met with was considerably less than that seen in the previous year. In 17 cases there was a condition similar to scabies. In 20 cases enlarged cervical glands were seen, but there were no signs of tubercular involvement of the lung. Outbreaks of diphtheria have caused some anxiety during the year, while less serious epidemics of morbilli and pertussis were met with.

In regard to the school buildings, the Inspector is satisfied in the majority of instances. In one or two schools the sanitary arrangements are unhygienic.

Dr. A. H. Clarke, who has care of the Hobart district, examined 1,850 children, and found defects in 656. The chief defects were 156 of vision, 298 cases of adenoids and enlarged tonsils, 9 of heart disease, 11 of goitre and 9 of scoliosis.

One case of suspected pulmonary tuberculosis and two cases of other forms of tuberculosis were detected.

A number of scattered cases of diphtheria occurred, but there was nothing to indicate the existence of a focus of infection in any of the schools. There were 12 cases of scabies. The children were excluded from school until such time as the affection is cured. There were 11 cases of ringworm and 29 of *pediculi capitis*. Not a single case of body lice has been detected for several years.

Treatment was instituted in nearly all cases in which it was recommended. The staff of the General Hospital, Hobart, treated 63 children referred to them. The general health of the children was satisfactory, but a few were poorly fed. One child complained of headache, which was traced to excessive labour. He sold milk before school; between 12 and 1 and 4 and 6 he assisted a grocer, and in the evening sold tickets for picture-shows.

Dr. Clarke draws a comparison between the condition of children 10 years before, when the first medical inspection of the State school children was begun in Hobart, and that of the children in the year under review. Signs of nervous affection and overstrain were frequent in 1905, and were very rare in 1915. The percentage of children suffering from adenoid growth was approximately the same in both years, but the condition 10 years before was rarely treated. The most striking alteration of which he writes is that connected with the school buildings themselves. Scarcely less important is the change of attitude of the teachers toward the Medical Inspector. Hostility or indifference has given way to marked interest and co-operation. The appointment of a school nurse has contributed in no small degree to the success of the work. Her personal influence with indifferent or ignorant parents had led to treatment being adopted in many cases in which the defects discovered would otherwise have been neglected.

Dr. T. H. Hogg, the School Medical Officer for the Launceston district, records that, with the exception of one school, the hygienic conditions of the buildings had improved considerably. In regard to epidemic disease, he reports that measles gave rise to some anxiety during the year. There were 263 cases, of which 150 occurred in one school during the course of three weeks. None of the cases were severe. There were 56 cases of diphtheria, with four deaths. Dr. Hogg complains of the practice of sending children from the General Hospital back to school after a fortnight. The rules concerning this and other infective diseases are quite definite. In contrast to this practice, that obtaining in regard to infection arising in the homes of teachers is cited. Every precaution is taken to prevent an infected teacher from coming into contact with school children until the whole family was proved by bacteriological examination to be free from infection.

Dr. Hogg repeats his demand for the institution of adequate dental inspection and treatment. He pays a high tribute to the school nurse and to the headmasters for the manner in which they have assisted him in carrying out his work.

The actual number of children examined is not given. Dr. Hogg publishes a table, giving the frequency of the various defects discovered. Hypertrophy of the tonsil and post-nasal growths were met with 137 times and treatment was instituted in 95 cases. Deafness and otorrhœa was found 20 times, and was treated in each case. Defective vision was discovered in 61 children and in 53 treatment was carried out. There were 41 cases of conjunctivitis and blepharitis and 10 of trachoma. Scoliosis was met with in eight children and anæmia in 18. The skin defects discovered included 18 cases of ringworm, 46 cases of impetigo, 30 cases of pediculosis and 5 cases of scabies. In addition to the infective diseases mentioned above, there were 7 cases of tuberculosis, 14 of parotitis, 17 of varicella, 7 of scarlatina, 4 of pneumonia, 2 of rheumatic fever, 25 of pertussis, 3 of enteric fever, and 1 of meningitis. The school nurse paid 1,287 visits to the homes of the children. During the course of the year the teeth were examined in 735 children, and were found to be good in 330, medium in 222, and bad in 183. Treatment was carried out in 85 cases only.

The expenditure of the Education Department for the year 1915 amounted to £110,980 14s. 3d. Of this sum, £1,342 8s. 5d. was spent on medical inspection. Salaries amounted to £956 13s. 4d., travelling expenses to £368 16s. 1d., medical examination fees to £12 1s. 6d., and materials to £4 17s. 6d.

THE HEALTH OF HOBART.

Dr. Gregory Sprott, Medical Officer of Health of Hobart, has issued his annual report for the year ending December 31, 1915:—

Vital Statistics.

The estimated population at the end of 1915 was 31,809. During the year, 1,391 births were registered. This yields a birth-rate of 37.16, calculated on the mean population. The birth-rate was higher in 1912, 1913, and 1914, and lower each year between 1905 and 1911. The number of deaths registered was 444. The death-rate was 13.96, which compares favourably with the average death-rate for the quinquennial period, 1911-15. The highest rate was in 1913, *viz.*, 15.55. The death-rate between the years 1906 to 1910 averaged 12.55, this low figure being due to the unusually low mortalities of 9.9 and 10.96, in 1909 and 1910 respectively. The infantile mortality was 82.06. In 1906 it was 126.23, and in 1905, 1907, 1910 and 1914 it varied between 103.92 and 115.4. In 1911 it was 84,5. and in 1912 it was 82.24. In the years 1909 and 1913 the infantile death-rate was lower than that of 1915, being 78.42 and 80.46 respectively.

In regard to the causes of death, diseases of the heart heads the list, with 45 deaths, cancer comes next, with 32,

pneumonia is third, with 23, tuberculosis is fourth, with 22, diseases of the brain (presumably including cerebral hæmorrhage) come fifth, with 16, bronchitis follows, with 13, and then come puerperal fever, enteritis and Bright's disease, with 6, diphtheria, with 5, and enteric fever and appendicitis, with 4. Senility, premature birth, accident and suicide are also mentioned.

Notifiable Diseases.

During the course of the year, 152 cases of diphtheria, 28 cases of varicella, 25 of enteric fever, 15 of scarlatina, 9 of puerperal fever, 6 of cerebro-spinal meningitis, 5 of ophthalmia neonatorum, and 1 of anterior-poliomyelitis were notified. In two of the cases reported as cerebro-spinal meningitis the diagnosis subsequently proved to be incorrect. In regard to the diphtheria cases, Dr. Sprott points out that there were 34 less than in the previous year. Only 19 patients were nursed at home, the remainder being admitted to Vaucluse. The death-rate was 3.6%. One carrier was discovered at a school from which several cases had already been notified. Dr. Sprott emphasizes the necessity of a proper bacteriological examination of all children who have been in contact with a patient.

There were no deaths from scarlatina, but 6 of the 9 patients suffering from puerperal fever died.

The number of cases of pulmonary tuberculosis notified during the year was 68. He points out that there is urgency in the provision of a consumptive home for persons suffering from advanced disease. Eradication of tuberculosis is more likely to be achieved by preventive measures than by curative agents. The most important step in the prevention is the isolation of advanced cases. Complete supervision, together with satisfactory nursing, can only be obtained for these cases in a well-equipped home designed for the purpose.

Infectious Diseases Hospital.

There were 223 patients admitted during the year to the Infectious Diseases Hospital, Vaucluse. Of these, 131 came from Hobart, 87 from other parts of Tasmania and 5 from over-seas. The new hospital will be ready for occupation within a short time.

Disinfection.

Disinfection of premises was carried out 355 times in connexion with infective diseases, and the vehicles used for the transport of patients suffering from these diseases were disinfected in every instance. The steam disinfector at Vaucluse has been handed over to the local authority. A considerable amount of disinfection work was carried out by the Department at the request of the Military Authority.

Food Supply.

Meat, fish, eggs, fruits, etc., amounting in the aggregate to 3½ tons, were seized as being unfit for human consumption and destroyed. In one case a successful prosecution was conducted of a seller of adulterated butter. Dr. Sprott makes reference to the necessity of compelling butchers to comply with the regulations dealing with the sale of meat. He refers also to the insanitary method of carrying meat from the abattoirs, and insists on the provision of properly constructed dust-proof vans.

In regard to milk, 4 out of 75 samples analysed proved to be adulterated. Prosecutions were undertaken, and fines, with costs, to the value of £12 1s. 6d. were inflicted. Dr. Sprott is of opinion that no punishment should be considered too severe for the dishonest trader who deprives infants of their every-day food. If magistrates concurred in this view and imposed fines of a reasonable magnitude, better results would be achieved.

Inspection of Premises.

Satisfactory conditions were found at the hotels and public-houses visited. A large number of houses were inspected, and 17 were condemned. In four cases the premises were demolished.

The number of factories inspected was 278. We learn that the Factory Regulations are being enforced, notwithstanding some dissatisfaction arising in regard to the compulsory alterations to buildings, many of which are either new or have been recently repaired.

Noxious Trades.

The recommendation is again repeated for the proclamation of a noxious trade area. There are 13 registered noxious trades in various parts of the city.

General Hygienic Measures.

The work of rat destruction has proceeded during the year. In regard to the collection of garbage, Dr. Sprott announces that a scheme is now under consideration which should prove complete and systematic. He calls for the appointment of additional inspectors to carry out the important work of safeguarding the health of the community.

Vital Statistics.

NEW SOUTH WALES.

The annual return of the Government Statistician dealing with the vital statistics of New South Wales has been published in the *New South Wales Government Gazette*, No. 123, under date of July 7, 1916.

The population of the State at the end of the year 1915 was estimated at 1,868,644. The natural increase was 33,275. This, however, was depreciated by an abnormal emigration of persons undertaking military duty with the Imperial Forces. The actual increase during the year was 6,616.

Marriages.

The marriage-rate for the year was 9.70 per 1,000 of population. This rate is the highest since the year 1857. The metropolitan rate was 13.36, whereas the rate in the remainder of the State was 7.21 per 1,000 of population. Of the 18,129 couples, 684 males and 3,781 females were under 21 years of age. Illiteracy, as evidenced by the substitution of a mark for a signature, was present in 59 males and 61 females. The number of bridegrooms who had been married before was 900, 873 being widowers and 127 divorced persons. The number of previously married brides was 978, including 793 widows and 185 *divorcées*.

Births.

The number of infants born during the year was 52,885. Of these, 27,105 were males and 25,780 were females. The birth-rate was 28.31 per 1,000 of population. During the period 1906-1909 the birth-rate was below 28. It exceeded 28 in the two following years, and reached the maximum of 29.9 in 1912. In 1913 it was 28.81, and in 1914 it was 28.93. The number of illegitimate children born during the year 1915 was 2,681. This is equivalent to 5.07% of the total births and 1.44 per 1,000 of population. The metropolitan rate was 1.95 and the rate for the remainder of the State 1.08. The illegitimate birth-rate has tended to decrease during the past ten years.

Deaths.

During the year, 19,616 deaths were registered in New South Wales. The death-rate is accordingly 10.50 per 1,000 of population. This rate is slightly higher than the average for the previous period. The lowest death-rate in this period was recorded in 1910, when it was 10.02, and the highest in 1913, when it was 10.91. The number of deaths of males to that of females was in proportion of 141 per 100. Of the 19,610 people who died, 3,603 were under one year of age. The infantile mortality was 68.1 per 1,000 births. During the decennial period the infantile mortality has varied very considerably. Starting in 1906 with 74.5, it reached 88.6 in 1907, declined gradually to 69.5 in 1911, rose again in the two succeeding years to 78.3 and fell in 1914 and 1915. The total number of persons under five years of age who died was 5,164 and 65 or over was 5,724.

The causes of death are set up in tables arranged according to the Bertillon system, and the ages of the patients at death are entered. There were 2,854 deaths from diseases of the cardio-vascular system. No less than 1,656 deaths were due to organic diseases of the heart. Cerebral hæmorrhage accounted for 611, diseases of the arteries, including atheroma and aneurysm, accounted for 280, and acute endocarditis for 110. In addition to these deaths, there were 872 from Bright's disease and 150 from cirrhosis of the liver.

Infective diseases caused a very large number of deaths. Diarrhœa and enteritis heads the list with 1,620, tuberculosis was responsible for 1,297 deaths, pneumonia for 925, broncho-pneumonia for 498, morbilli for 324, diphtheria for

272, enteric fever for 219, acute bronchitis for 212, influenza for 132, acute rheumatism for 109, scarlatina for 97, cerebro-spinal meningitis for 81, syphilis for 59, septicæmia for 49, dysentery for 46, tetanus for 37, erysipelas for 34, anterior poliomyelitis for 11, beri-beri and malaria for 7 each, leprosy for 4 and variola for 1.

The number of deaths from cancer was 1,385. Anæmia killed 129 persons. The deaths due to abnormal conditions of the puerperal state include 104 from puerperal septicæmia, 48 from puerperal albuminuria, 37 from puerperal hæmorrhage, 31 from accidents from pregnancy, 15 from *phlegmasia alba dolens*, and 8 from illegal operations. In addition, there were 25 due to "other accidents of childbirth," and 4 entered as "following childbirth."

Medical Matters in Parliament.

VICTORIA.

Mr. A. R. Outtrim, in the Legislative Assembly of Victoria, asked the Minister of Public Instruction on July 26, 1916:—

> If the Government has taken any steps to secure the benefit of university instruction, by correspondence or otherwise, to country students?

The Minister, Mr. H. S. W. Lawson, replied as follows:—

> Shortly after I was appointed Minister of Public Instruction, I caused representations to be made to the university authorities as to the disabilities of country students in regard to university education. Subsequently, I received from the honourable member for Maryborough, through the Premier's Department, particulars of a system of tuition by correspondence which, I understand, is in vogue in Queensland. I have had a conference with the University Authority in regard to the matter. It is now being further considered by representatives of the University, who are to submit a report to me in due course.

SOUTH AUSTRALIA.

Mr. T. Ryan asked the Treasurer of the South Australian Government, on July 18, 1916, whether his attention had been drawn to the deliberations of a committee of medical men in New South Wales, under the chairmanship of Sir Herbert Maitland, on the various aspects of venereal disease. He asked whether the report of that Committee would be available in the two Houses, or if the Government proposed to institute a similar inquiry.

The Treasurer, in his reply, referred to the report of the Royal Commission in England, and expressed the opinion that this report would be of value in South Australia, and probably more so in Sydney.

On July 19, 1916, Mr. Ryan again brought the matter up, and pressed for a local inquiry. He referred to the report of a committee appointed by the Victorian Government. The Treasurer stated that he had a copy of the report from the Federal Government on the question. He understood that the Chief Secretary was communicating with the Federal Authority on the matter. Steps were also being taken to put into force a system whereby venereal diseases might be treated at the Adelaide Hospital.

MACLEAY DISTRICT HOSPITAL.

The annual report of the Macleay District Hospital for the year 1915 reveals a considerably increased expenditure, as compared with the previous year. This increase was in part due to an increase in the number of patients and the consequent additions to the staff and in part to the higher cost of living. The total number of in-patients was 568, as compared with 335 in 1914. The average cost per patient works out at £60 0s. 1d. per annum. The total expenditure during the year exceeded £2,200. The income was made up of a Government subsidy for 18 months from January 1, 1914, of £698, a special grant of £150, contributions on account of patients amounted to £460, subscriptions amounting to £150, donations and proceeds of entertainments totalling over £700, and a few small amounts.

The Medical Officers report that, of the 535 patients admitted, together with the 23 in hospital on the first day of the year, 32 died. Operations were performed on 101. They call attention to the great inconvenience experienced as a result of the absence of a hot-water service. Inconvenience becomes a danger when the hot water has to be carried into the operating theatre. They also emphasize the need for the remodelling and extension of the isolation department, and expressed the opinion that the installation of a septic tank system would greatly increase the convenience of the institution and the safety of the patients and nurses.

Special Correspondence.

(By Our Special Correspondent.)

LONDON LETTER.

Enrolment of Doctors for War Service.

The War Office issued the following announcement on April 1, 1916:—

> In order to maintain the supply of medical officers required to meet the needs of the Military Services, it is urgently necessary in the interests of the civil community, no less than of our Armies, that all qualified medical men not exceeding forty-five years of age, irrespective of their circumstances, should without delay enter their names under the Enrolment Scheme which has been established by the Central Medical War Committee, and has the authorization of the War Office.

The work of enrolment is carried out by the Central Medical War Committee for England and Wales, the Scottish Medical Service Emergency Committee, and the Irish Medical War Committee.

Enrolment does not mean that the medical man is at once called up for service in the R.A.M.C.; he may never be called up, and, in any case, will not be called up until the proper time has come for his services to be accepted.

The purpose of the scheme is to secure that those doctors are selected for military purposes who can best be spared at the particular date and from the particular place, with due regard to the needs of the civil population, to the personal circumstances of the doctor, and to the requirements of the Armies.

To carry out efficiently the process necessary for an equitable distribution of the burden as it affects the medical profession and the civil population, all doctors of suitable age should offer themselves for service, quite irrespective of their particular circumstances, whatever these may be, so that a proper selection may be made by a body equipped with the requisite information from all parts of the country and thus competent to make the necessary comparisons. The only alternatives are haphazard recruitment and arbitrary demand.

The Central Medical War Committee and the corresponding Committees in Scotland and Ireland include representatives of the Royal College of Physicians and the Royal College of Surgeons, of the Universities and Medical Schools, and of the British Medical Association, and have associated with themselves in their work representatives of the Government Departments mainly concerned.

The Committees have an organization of representative local committees in all parts of the three countries, from which they obtain local information and advice, and they work in daily contact with the various Government Departments concerned.

In order to secure the medical officers needed for the Army month by month, with the least possible interference with the needs of the civil population and the least possible injury to the individual practitioner, it is necessary that every medical man under the age of forty-five, who does not hold a certificate of enrolment, or of provisional acceptance by the War Office, should enrol at once.

Science and Industry.

Under the title of "Organic Products Used in Medicine," Professor H. E. Armstrong delivered a lecture at the Royal Institution on March 23, 1916, which was of more than usual interest at the present juncture of affairs in the history of Europe. He described results obtained through the

feverish activity of German laboratories in the production of artificial drugs, based on hydro-carbon originally obtained by Faraday as a by-product of oil gas, and pointed out that benzine, the foundation-stone of the organic chemical industry, was discovered and defined in that Institution 90 years ago. Through Faraday's pioneer work, the light hydrocarbons of coal tar were investigated at the College of Chemistry in 1846. Ten years later the first artificial dye was discovered and manufactured, and a perfume was also artificially made near Harrow. The connexion between chemical constitution and physiological action was first brought into prominence in Edinburgh. Abel developed the gun-cotton industry into a stable existence at Waltham Cross in the 'sixties, and its application in conjunction with nitroglycerin to military purposes resulted from the work of Abel and Dewar. Why, he asked, after having done so much, had we allowed ourselves to fall behind? If we were not to get what we wanted from Germany after the war, we must attack the problem systematically and scientifically. No attempt to do so was being made. The Universities and public schools placed so high a premium on classical studies that ability was attracted away from science. With no regular remunerative outlet for science, few took it up, and workers found little opportunity in industry. The Royal Society had become the preserve of the academic worker; consequently, it had been reduced to impotence, and no sufficient use was made of its great resources. Though 999 out of every 1,000 suggestions brought before the Inventions Committee were useless, distinguished scientific men were wasting their time on such committees, and the country was misled into supposing that it was receiving the help of science. The casual inventor had been considered, but not those who could give efficient assistance. It was not that science was unable to help; it was simply not allowed to. It was, however, useless to complain of Government apathy and of public ignorance as to the application of science to industry, when the body scientific itself remained unorganized. Science, he feared, was losing rather than gaining ground in this country. Through being ineffective collectively, science was voiceless in the councils of the nation.

A Scientific Societies' Combine.

A conference convened by the President and Council of the Royal Society was held at Burlington House towards the end of March to consider the desirability of establishing a Conjoint Board of Scientific Societies for the purpose of organizing scientific effort in this country. Delegates from numerous societies attended to confer with the Royal Society.

The following resolution was passed unanimously, and a Committee was appointed to draft a scheme for giving effect to the resolution and to report thereon to a future meeting:

> This meeting considers that it is desirable to establish a Conjoint Board of Scientific Societies for the purpose of:—
>
> (1) Promoting the co-operation of those interested in pure or applied science;
> (2) Supplying a means by which the scientific opinion of the country may, on matters relating to science, industry, and education, find effective expression;
> (3) Taking such action as may be necessary to promote the application of science to our industries and to the service of the nation;
> (4) Discussing scientific questions in which international co-operation seems advisable.

Correspondence.

CRIMINOLOGY AS A BRANCH OF MEDICINE.

Sir,—The article in your issue of the 8th inst., contributed by the Pathologist of the Victorian Lunacy Department on Criminology as a Branch of Medicine, was of direct interest, because, apart from other aspects, it affected a portion of the duties of the Government Medical Officer of this State, the routine of which the author was possibly unacquainted. As the article presents itself to me, he criticizes a system for which both he and the Victorian members of the profession may possibly regard me as the responsible officer. To a certain and in fact almost to a complete extent this is correct, but, apparently, from its contents, the methods followed are not as universally recognized as one might infer. With this view before me, I considered it advisable to clear up a possible misunderstanding.

It is not my intention to enter into the subject of "Criminology as a Branch of Medicine." That is too extensive for a letter in your columns, but I desire to emphasize the fact that no greater care could be taken, or is taken elsewhere, than what is done by the law authorities in Victoria, *viz.*, in obtaining a medical report before dealing with criminals charged with certain offences. I presume this would equally apply to the other States. The opinions of their Honours the Judges, the Prosecutors for the King in the City and the Country Circuit Courts, the Crown Solicitor, the officers of the Crown Law Department, including the Police Magistrates and most of the Justices in criminal jurisdiction in the metropolitan area would uphold this statement. That there may have been individual cases dealt with by the lower courts unrecognized, where disease may have been the determining factor of the crime rather than vicious temperament, may not be denied. In my experience, such cases were exceptional, and in the majority were the temporary result of over-indulgence in drink rather than the result of organic or functional defect observable in the mentally afflicted. The procedure on admission to the Melbourne Gaol, which will be referred to later, guarantees reasonable security that punishment will not be incurred if the accused is regarded as irresponsible.

The legal definition of responsibility may be included in my present desire not to refer to this and other aspects of criminology—such as the causes of crime—its psychical peculiarities—its treatment—its punishment—or even the methods of the Criminal Investigation Department. All these, with the latter exception, might form the topic of an interesting discussion between practitioners who would be familiar with the subject.

In dealing with those charged with crime, certain details are worthy of notice, and show the care which the Crown Law Authorities are anxious and endeavour to ensure. (1) Every person is seen by the medical officer on the accused's reception at the gaol. (2) If the circumstances warrant or the crime is of extreme gravity, even if not considered necessary, the individual is placed in observation day and night. (3) Frequent and often daily examinations are made by the medical officer. (4) In every case where irresponsibility is deemed conclusive, reports to that effect are sent not only to the Justice in the Lower Courts, but to the Crown Solicitor, should the accused be committed for trial. (5) If the counsel for the defence desires to call in a medical witness who is not a mental expert, the Crown cannot interfere with what the adviser of the accused considers legitimate procedure. (6) That the decision in a Court of Criminal Jurisdiction does not rest with the medical officer, but with twelve jurymen, who have neither knowledge of law nor medicine, but who give such decision on sworn statements, and on the legal aspect of the case, conveyed to them by the summing up of the learned judge. (7) That punishment inflicted by a Court, no matter of what degree, such as flogging or solitary confinement, is never carried out till the prisoner is reported as fit to undergo it by the medical officer, and that, finally, in the case of those sentenced to death, the Executive before advising His Excellency the Governor is always provided with a special report from the judge who presided, together with a copy of his notes taken during the trial, a report from the medical officer, as well as others from relatives or acquaintances of the condemned, police officials, and in some instances from special medical consultants appointed by the Crown or suggested by the friends.

As stress is laid in the paper of the 8th inst., may I say, in conclusion, with reference to the author's opinion that only those with lunacy experience should be appointed for the class of work required, the fact is overlooked that medical officers have nothing to do with penal administration; that their duties are not confined to psychological examinations, but, in addition to the ordinary medical requirements, practically embrace the whole field of forensic medicine. Secondly, that, although the present Government Medical Officer has had upwards of twenty years of asylum service, he soon recognized it would be necessary for him to acquire

other experience and knowledge than what he had gained by long association with and treatment of patients confined in lunatic asylums, and that such knowledge and experience could only be obtained by hard work, investigation, careful and exhaustive attention to detail in dealing with those charged with criminal offences.

In conclusion, may I say I have read the letter from the author dated the 14th inst.? After perusing the original article, I asked for the official papers relating to a woman who had been sentenced to a month's imprisonment "who was found to be the victim of wireless telegraphy," and evidently to whose case special reference was made in support of his argument. So far, my request has not been complied with, but, since writing the foregoing, some statements have been supplied from the author, and which may be of help in identifying the patient.

Yours, etc.,
J. A. O'BRIEN,
Government Medical Officer.

Treasury Buildings, Spring Street,
Melbourne, July 24, 1916.

Special Notice.

The members of the honorary medical staffs of the public hospitals of New South Wales in receipt of a Government subsidy are invited by the Council of the New South Wales Branch of the British Medical Association to meet at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on Thursday, August 10, 1916, at 8.15 p.m., for the purpose of deciding what attitude should be taken in regard to Section 10 of the Government Circular, No. 03/15,293:—

10. "That any employee of the Government of New South Wales who may be injured in the execution of his duty shall, on application, be received and treated, and, if necessary, admitted for further treatment free of all charges for such treatment and maintenance in any hospital in the State receiving subsidy from the Government."

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix.

Education Department, South Australia, Medical Inspector.

Thursday Island Hospital, Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Brisbane United F.S. Institute.
WESTERN AUSTRALIA. (Hon. Sec., 230 St. George's Terrace, Perth.)	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Department of Public Instruction—New Appointments as Medical Officer, Ophthalmic Surgeon, Ear, Nose and Throat Surgeon, Physician. Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	F.S. Lodges, Wellington, N.Z.

Diary for the Month.

Aug. 8.—N.S.W. Branch, B.M.A., Ethics Committee.
Aug. 10.—Vic. Branch, B.M.A., Council.
Aug. 11.—N.S.W. Branch, B.M.A., Clinical Evening.
Aug. 11.—S. Aust. Branch, B.M.A., Council.
Aug. 15.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Aug. 16.—W. Aust. Branch, B.M.A., General.
Aug. 16.—North Eastern Med. Assoc. (N.S.W.).
Aug. 17.—City Med. Assoc., N.S.W.
Aug. 18.—Q. Branch, B.M.A., Council.
Aug. 25.—N.S.W., Branch, B.M.A., Branch.
Aug. 29.—N.S.W., Branch, B.M.A., Medical Politics Committee, Organization and Science Committee.
Aug. 30.—Vic. Branch, B.M.A., Council.
Aug. 31.—S. Aust. Branch, B.M.A., Branch.
Sept. 1.—Q. Branch, B.M.A., Branch.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

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